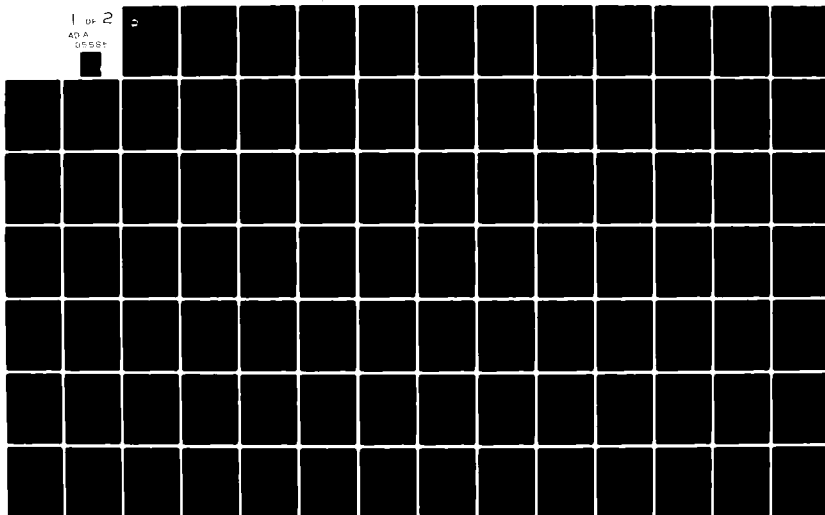


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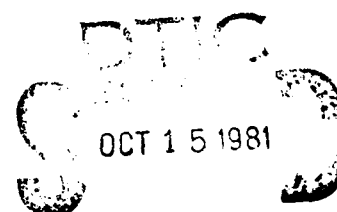
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No. 47

MAY - JUNE 1980

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April 9, 1981

Vice Director for Foreign Intelligence
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20. ABSTRACT This is the Soviet Laser Bibliography for May-June 1980, and is No. 47 in a continuing series on Soviet laser developments. The coverage includes basic research on solid state, liquid, gas, and chemical lasers; components; nonlinear optics; spectroscopy of laser materials; ultrashort pulse generation; crystal growing; theoretical aspects of advanced lasers; and general laser theory. Laser applications are listed under biological effects; communications; beam propagation; computer technology; holography; laser-induced chemical reactions; measurement of laser parameters; laser measurement applications; laser-excited optical effects; laser spectroscopy; beam-target interaction; and plasma generation and diagnostics.		

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Introduction

This bibliography has been compiled under an interagency agreement as a continuing effort to document current Soviet-bloc developments in the quantum electronics field. The period covered is May-June 1980, and includes all significant laser-related articles received by us in that interval. The bulk of the entries come from the approximately 30 periodicals which are known to publish the most significant findings in Soviet laser technology. Citations from the Russian Reference Journals are also included. Laser items from the popular or semipopular press are generally omitted.

For convenience we have abbreviated frequently cited source names; a source abbreviations list and an author index are included. All sources cited with no parenthetical notation are available at the Library of Congress. A parenthetical entry (RZh, KL) indicates the secondary source in which the citation was found as a bibliographic entry or abstract, but for which the original source is not currently available at the Library. The authors' affiliations are indicated by the numbers in parentheses following the authors' names in the text and are listed in the Author Affiliations List. New affiliations are assigned a new number and are added to a cumulative list which includes all affiliations from 1969 to the present. Only those affiliations which appear in this issue are listed in this issue's Author Affiliations List.

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I. BASIC RESEARCH

A. SOLID STATE LASERS

1. Crystal: Ruby

1. Anikeyev, B.V., V.M. Andreyanov, and V.A. Fenchak (136). Modulation of an integrated spectrum in a nonstationary ruby laser with active phasing of the radiation spectral components. Sb 1, 61-65.
2. Konevskiy, V.S., Ye.V. Krivonosov, and L.A. Litvinov (188). Variation in the inhomogeneity of the refractive index of ruby single crystals after annealing at a pre-melting temperature. Tr 1, 21-23. (RZhRadiot, 6/80, 6Ye218)

2. Crystal: Rare-Earth Activated

a. Nd³⁺

3. Korniyenko, L.S., N.V. Kravtsov, Ye.G. Lariontsev, and V.A. Sidorov (98). C-w solid state laser in a kinematic mode lock regime. ZhTF P, no. 12, 1980, 733-736.

b. Dy³⁺

4. Antipenko, B.M., A.L. Ashkalunin, A.A. Mak, B.V. Sinitsyn, Yu.V. Tomashevich, and G.S. Shakhkalamyan (0). Three-micron lasing from Dy³⁺ ions. KE, no. 5, 1980, 983-987.

3. Crystal: Miscellaneous

5. Arkhangel'skaya, V.A., and P.P. Feofilov (0). Tunable lasers based on color centers in ionic crystals. KE, no. 6, 1980, 1141-1160.
6. Baranov, P.G., Yu.P. Veshchunov, R.A. Zhitnikov, and N.G. Romanov (4). Active medium for lasers. Author's certificate USSR, no. 693500, 3 Nov 1979. (RZhRadiot, 5/80, 5Ye292)
7. Gusev, Yu.L., A.V. Kirpichnikov, S.N. Kruglov, and S.I. Marennikov (159). C-w room temperature laser using F_2^+ color centers in LiF crystals and tunable over the 0.86 - 1 μ spectral region. KE, no. 5, 1980, 1125-1127.
8. Klimontovich, Yu.L. (2). Effect of fluctuations in the critical region during a second order phase transition on the nonequilibrium phase transition. ZhETF, v. 78, no. 6, 1980, 2384-2391.
9. Krutik, V.M., D.Yu. Pushcharovskiy, Ye.A. Pobedinskaya, and N.V. Belov (2). Crystal structure of α -Ker[PO₃]₄. DAN SSSR, v. 252, no. 3, 1980, 607-610.
10. Martynovich, Ye.F., and V.A. Grigorov (313). Optical properties of F_2^- centers in lithium fluoride single crystals. FTT, no. 5, 1980, 1543-1545.

4. Semiconductor: Simple Junction

a. GaAs

11. Narzullayev, K. (1). Study of single-channel GaAs semiconductor injection lasers. Fizicheskiy institut AN SSSR. Dissertation, 1979, 15 p. (KLDV, 6/80, 8163)
12. Yeliseyev, P.G., V.P. Strakhov, S.V. Tikhomirov, T.N. Khleskova, and N.P. Khatyrev (0). Study on the output power stability of c-w radiation from GaAs injection lasers. Sb 2, 339. (RZhRadiot, 6/80, 6Yel06)

b. InP

13. Ismailov, I.I., and I.M. Tsidulko (0). Temperature dependence of the electroluminescence band shape and threshold current of InP and InPAs homolasers. DAN Tadzh, no. 12, 1979, 739-742. (RZhF, 6/80, 6D1052)

c. PbS

14. Kowalczyk, L. (NS). Current-tunable laser using a p-n junction in PbS. Elek, no. 11, 1979, 468-469. (RZhF, 6/80, 6D1054)

d. PbSe

15. Freik, D.M., I.I. Brodin, V.M. Shperun, and Ya.V. Solonichnyy (0). Physical-chemical bases for controlling the type and concentration of charge carriers in lead selenide films during synthesis. FizKhOM, no. 3, 1980, 153-155.

e. ZnTe

16. Lukashevich, P.G., V.P. Gribkovskiy, and V.A. Ivanov (0).

Stimulated emission from intrinsic zinc telluride under single photon optical pumping. ZhPS, v. 32, no. 6, 1980, 1073-1078.

5. Semiconductor: Mixed Junction

6. Semiconductor: Heterojunction

17. Akhmedov, D., N.P. Bezhan, N.A. Bert, S.G. Konnikov, V.I. Kuchinskiy,

V.A. Mishurnyy, and Ye.L. Portnoy (4). Effect of internal deformations on the polarization of radiation in InP-InGaAsP heterolaser structures. ZhTF P, no. 12, 1980, 705-708.

18. Akhmedov, D., N.P. Bezhan, V.I. Kuchinskiy, V.A. Mishurnyy, Ye.L.

Portnoy, Ye.V. Russu, and V.B. Smirnitskiy (4). InGaAsP/InP semiconductor heterolaser with a corrugated waveguide layer. ZhTF P, no. 12, 1980, 708-712.

19. Bogatov, A.P., P.G. Yelisseyev, M.A. Man'ko, G.T. Mikayelyan, and

Yu.M. Popov (1). Injection laser with an unstable resonator. KE, no. 5, 1980, 1089-1092.

20. Bogdankevich, O.V., S.A. Bondar', N.A. Borisov, D.V. Galchenkov,

A.D. Konovalov, V.F. Pevtsov, Yu.Ye. Petrushenko, S.S. Strel'chenko, and V.N. Ulasyuk (445). Semiconductor laser with transverse e-beam pumping based on multilayered heterostructures in a GaAs-AlAs system. KE, no. 6, 1980, 1209-1212.

21. Milevskiy, L.S., S.L. Milevskiy, Yu.A. Sidorov, V.M. Malovetskaya, and T.I. Chaava (22,152). Some dislocation characteristics of $Pb_{1-x}Sn_xTe$ single crystal structures. Kristal, no. 3, 1980, 635-639.
22. Yelyukhin, V.A., V.R. Kocharyan, Ye.L. Portnoy, and B.S. Ryvkin (4). Polarization of radiation in injection lasers. ZhTF P, no. 12, 1980, 712-715.
23. Zargar'yants, M.N., and O.M. Grudin (0). Spectral dependence of spatial phase inhomogeneities in modulated spontaneous diode emission. ZhTF, no. 6, 1980, 1358-1363.

7. Semiconductor: Theory

24. Boyko, Yu.B., Ye.I. Zabello, and Ye.A. Tikhonov (5). Study on the leakage modes of a superluminescent waveguide laser. UFZh, no. 6, 1980, 982-988.
25. Gaydalis, V.I. (554). Model for generation of light by free charge carriers in organic semiconductors. Lit fiz sb, no. 3, 1980, 47-55.
26. Gershenzon, Ye.M., B.N. Tumanov, and B.I. Levit (464). Autodyne and modulation characteristics of injection semiconductor lasers. IVUZ Radiofiz, no. 5, 1980, 533-541.

27. Linnik, L.F., and L.G. Linnik (6). Indirect optical transitions during absorption of IR light by nonequilibrium holes in germanium. UFZh, no. 5, 1980, 795-798.
28. Luk'yanov, V.N., and A.T. Semenov (141). Light amplifier with spontaneous background filtering. KE, no. 6, 1980, 1370-1373.
29. Malakhova, V.I., L.A. Rivlin, Yu.A. Tambiyev, and S.D. Yakubovich (141). Stationary single-mode lasing in a semiconductor injection laser with a nonselective resonator. KE, no. 6, 1980, 1252-1256.
30. Medvedev, S.P. (110). Propagation of a Gaussian beam of light along a back-biased p-n junction. Tr 2, 8-11. (RZhRadiot, 5/80, 5Ye162)
31. Nakwaski, W. (NS). Recombination phenomena in semiconductors. Part 1. Radiative and nonradiative recombination, spontaneous and stimulated emission. Roz elektr, no. 4, 1979, 887-921. (RZhF, 5/80, 5Ye1351)
32. Nakwaski, W. (NS). Recombination phenomena in semiconductors. Part 2. Recombination in the region of a p-n junction and the injection laser. Roz elektr, no. 4, 1979, 923-943. (RZhF, 5/80, 5Ye1354)
33. Radautsan, S.I., N.N. Syrbu, V.K. Kiosev, A.G. Umanets, and L.F. Buga (0). CdP₂ single crystals doped with mercury and the study of photodiodes based on them. IAN M, no. 2, 1980, 57-61.

8. Glass: Nd

34. Alekseyev, N.Ye., A.K. Gromov, A.A. Izyneyev, V.B. Kravchenko, Chan Ngok, S.E. Sarkisov, and A.A. Kaminskiy (15,13). Spectral analysis and study of lasing from metaphosphate glasses with a high concentration of Nd³⁺ ions. NM, no. 6, 1980, 1056-1064.
35. Avanesov, A.G., Yu.G. Basov, V.M. Garmash, B.I. Denker, N.N. Il'ichev, G.V. Maksimova, A.A. Malyutin, V.V. Osiko, P.P. Pashinin, A.M. Prokhorov, and V.V. Sychev (1). High efficiency periodic pulsed neodymium phosphate glass laser. KE, no. 5, 1980, 1120-1122.
36. Divin, G.D., L.V. Ivanushkina, V.I. Korolev, and B.M. Sedov (0). Increasing the efficiency of laser amplifiers. ZhPS, v. 32, no. 6, 1980, 979-984.
37. Gapontsev, V.P., and Yu.Ye. Sverchkov (118). Luminescence kinetics and nonresonance migration of excitation energy over Nd³⁺ ions in laser glasses. Tr 3, 20-23. (RZhF, 5/80, 5D1032)

9. Glass: Miscellaneous

38. Oline, C.F., and M.J. Weber (NS). Beryllium fluoride optical glasses: preparation and properties. Sb 3, 351-364. (RZhRadiot, 5/80, 5Ye291)

B. LIQUID LASERS

1. Organic Dyes

a. Rhodamine

39. Aristov, A.V., M.B. Levin, and A.S. Cherkasov (0). Effect of reabsorption on the power of stimulated emission in solutions of rhodamine 6G. Ois, v. 48, no. 5, 1980, 958-962.
40. Aristov, A.V., and V.S. Shevandin (0). Spectroscopic evidence of reversible and irreversible transformations of rhodamine 6G molecules under two-step optical pumping. Ois, v. 48, no. 6, 1980, 1168-1172.
41. Nenchev, M.N. (Bulgarian). Induced losses in a rhodamine 6G waveguide laser with pulsed flashlamp pumping. ZhPS, v. 32, no. 5, 1980, 933-936.
42. Smirnov, V.S. (0). Divergence of radiation from a rhodamine 6G laser with flashlamp pumping. Ois, v. 48, no. 6, 1980, 1156-1163.

b. Polymethine

43. Przhonskaya, O.V. (5). Study on the interrelationship of the structural, spectral and lasing characteristics of polymethine dye molecules. Institut fiziki AN UkrSSR. Dissertation, 1979, 16 p. (KLDV, 5/80, 6898)

c. Miscellaneous Dyes

44. Danilova, V.I., K.M. Degtyarenko, V.V. Gruzinskiy, T.N. Kopylova, G.V. Mayyer, and V.F. Tarasenko (466). Lasing in para-quaterphenyl vapors pumped by XeCl* laser radiation. KE, no. 5, 1980, 1103-1105.
45. Gandel'man, I.L., Ye.A. Tikhonov, and M.T. Shpak (5). Kinetics of the lasing spectra of pulsed lasers using solutions of complex organic compounds with laser pumping. Sb 1, 18-45.
46. Grigor'yants, V.V., V.A. Aliyev, M.V. Povstyanoy, A.M. Fedorenko, and V.P. Kruglenko (15,435). Lasing from nitrogen-containing systems based on triazene under laser pumping. KE, no. 6, 1980, 1373-1375.
47. Gruzinskiy, V.V., V.I. Danilova, T.N. Kopylova, P.I. Petrovich, and Ye.Yu. Shishkina (0). Lasing in the UV spectral region from benzoxazoles. KE, no. 6, 1980, 1180-1185.
48. Karamaliyev, R.A. (86). Relaxation oscillations in dye lasers with distributed feedback. Tr 4, 65-67. (RZhF, 5/80, 5D1034)
49. Kravchenko, V.I., Yu.D. Opanasyuk, and A.A. Smirnov (5). Organic dye sweep lasers with coherent pulsed pumping. Sb 1, 3-17.
50. Kuz'min, M.G., and A.A. Pavlov (0). Regularity of photoluminescence from molecules in micellar systems. ZhPS, v. 32, no. 5, 1980, 891-896.

51. Marszalek, T., and M. Pruski (NS). Influence of triplet losses on the relaxation oscillations in dye lasers. APP, v. A56, no. 5, 1976, 673-676. (RZhF, 5/80, 5D1035)
52. Perchi, Z.I., and A.A. Tarnay (O). Automatic control and indication of the wavelength of radiation from a tunable organic dye laser. ZhPS, v. 32, no. 6, 1980, 998-1001.
53. Richter, P., I. Peczeli, and E. Lorincz (NS). Method to optimize the tunability range of a dye laser. Opt app, no. 3, 1979, 183-184. (RZhF, 5/80, 5D1040)
54. Smirnova, T.N., and Ye.A. Tikhonov (5). Optimal lasing regimes in dye lasers with directed pumping. Institut fiziki AN UkrSSR. Preprint, no. 5, 1980, 44 p.
55. Tugbayev, V.A. (O). Kinetics of lasing processes in rarefied POPOP vapors. Ois, v. 48, no. 6, 1980, 1164-1167.

2. Inorganic Liquids

56. Noskova, L.G., O.V. Yanush, and I.M. Batyayev (O). Inorganic luminophor using thionyl chloride. Zhurnal prikladnoy khimii, no. 1, 1980, 35-39. (RZhF, 6/80, 6D698)

C. GAS LASERS

1. Simple Mixtures

a. He-Ne

57. Akchurin, G.G., (45). Study on the spectral characteristics of radiation from gas lasers with modulated parameters (He-Ne dual-wave and Zeeman lasers). Saratovskiy GU. Dissertation, 1979, 17 p. (KLDV, 5/80, 6790)
58. Danilevko, M.V., V.P. Fedin, and M.T. Shpak (5). Frequency shift of nonlinear resonances in an He-Ne/CH₄ ring laser due to back-scattering. UFZh, no. 5, 1980, 745-750.
59. Gol'dort, V.G., and A.E. Om (159). Electrical circuit for stabilizing laser frequency. PTE, no. 3, 1980, 190-193.
60. Kats, A.V., V.M. Kontorovich, and A.V. Nikolayev (84,107). Sharp nonlinear resonances in a three-level system. ZhETF, v. 78, no. 5, 1980, 1698-1704.
61. Nikolayenko, A.N. (107). Various forms of power resonance in strong and weak waves of an He-Ne ring laser. IVUZ Radiofiz, no. 6, 1980, 767-768.
62. Privalov, V.Ye., and Ye.A. Smirnov (0). Study on dynamic resistance of gas discharge lasers using a glow discharge. OIS, v. 48, no. 5, 1980, 949-957.

2. Molecular Beam and Ion

a. CO_2

63. Alekseyev, V.Ye., V.N. Grigor'yev, N.S. Klimov, A.S. Myasnikov, A.V. Olenin, and V.P. Tokarev (139). Effect of active medium characteristics on the output power of an electroionization CO_2 laser. KE, no. 6, 1980, 1199-1202.
64. Avtonomov, V.P., V.N. Bel'tyugov, N.N. Kamenev, V.N. Ochkin, N.N. Sobolev, and Yu.V. Troitskiy (1). Line selection in a CO_2 laser using a reflecting diffraction interferometer. KE, no. 6, 1980, 1242-1251.
65. Basov, N.G., Ye.P. Glotov, V.A. Danilychev, and A.M. Soroka (1). Characteristics of a c-w electroionization CO_2 laser with cooling of the working mixture. KE, no. 5, 1980, 1067-1073.
66. Borisov, M.F., V.B. Znamenskiy, and T.P. Uvarova (0). Effect of lightly ionized matter on the density of a plasma produced by UV radiation in an atmospheric pressure CO_2 laser medium. ZhTF, no. 6, 1980, 1257-1261.
67. Borisov, V.N., V.V. Breyev, and Yu.N. Moshin (23). Computational analysis on the effect of the inhomogeneity of the gas parameters before an unstable resonator on the output power of radiation from a fast flow-through gas-discharge CO_2 laser. Institut atomnoy energii. Preprint, no. 3193, 1979, 8 p. (RZhF, 5/80, 5D1068)

68. Braun, P.A., and G.P. Miroshnichenko (0). Feasibility of efficient radiation pumping of a deformation vibration of linear triatomic molecules. OIS, v. 48, no. 6, 1980, 1081-1085.
69. Doronin, V.G., V.I. Novikov, and V.A. Stepanov (0). Gain coefficient and saturation parameter for a waveguide CO₂ laser. ZhPS, v. 32, no. 6, 1980, 985-991.
70. Goryachkin, D.A., V.M. Irtuganov, V.P. Kalinin, and O.I. Pashkov (0). Pulsed glow discharge at atmospheric pressure in a system of coaxial cylindrical electrodes. ZhTF, no. 6, 1980, 1231-1236.
71. Mirinoyatov, M.M., Sh.T. Rikhsiyeva, and A.A. Sipaylo (0). Noise in the radiation of a CO₂ laser with high-frequency pumping. DAN Uz, no. 11, 1979, 37-38. (RZhF, 5/80, 5D1066)
72. Rozkwitalski, Z. (NS). Influence of preionization discharge on the density of electrons produced by one-step photoionization in TEA lasers. BAPS, no. 4, 1979, 395-403. (RZhF, 6/80, 6D1097)
73. Schindler, K., G. Staupendahl, and T. Medoidse (East Germans). Efficient method of quenching parasitic lasing in high-power CO₂ laser amplifier systems. KE, no. 6, 1980, 1328-1330)
74. Snopko, V.N., and O.V. Tsaryuk (3). Effect of intraresonator plate anisotropy on the polarization of CO₂ laser radiation. KE, no. 5, 1980, 1095-1098.

75. Soloukhin, R.I., and N.A. Fomin (0). Resonant absorption of 9.6 μ radiation at high temperatures by CO₂ gas. ZhPMTF, no. 3, 1980, 3-9.
76. Vedenov, A.A., S.V. Drobyazko, M.M. Korzinkin (23). Characteristics of radiation from a periodic pulsed CO₂ laser with a closed gas cycle. KE, no. 6, 1980, 1186-1190.
77. Vitshas, A.F., Ye.P. Glotov, V.A. Danilychev, V.K. Orlov, N.V. Cheburkin, and V.V. Chulkov (1). Charged particle balance in an electroionization CO₂ laser plasma. Fizicheskiy institut AN SSSR. Preprint, no. 192, 45 p. (RZhF, 5/80, 5G210)
78. Vladimirov, V.V., V.N. Gorshkov, V.F. Shanskiy, and A.I. Shchedrin (5). Magnetic mirrors in high-power gas lasers with a self-terminating discharge. Fizika plazmy, no. 3, 1980, 653-657.
79. Zakhar'yash, V.F., V.M. Klement'yev, Yu.A. Matyugin, M.V. Nikitin, B.A. Timchenko, and V.P. Chebotayev (159). Frequency-phase coupling of a CH₃OH laser at 70.5 μ to a ¹²C¹⁶O₂ laser. KE, no. 6, 1980, 1365-1366.
- b. CO
80. Shebeko, Yu.N. (1). Theoretical study on the energy and spectral characteristics of an electroionization laser operating at the second harmonic of CO molecules. ZhTF, no. 6, 1980, 1262-1265.

c. Noble Gas

81. Aleksandrov, Ye.B., and V.K. Prilipko (0). Determining the hyperfine structure of $5d[7/2]_{3,4}$ states of ^{129}Xe . OIS, v. 48, no. 5, 845-849.
82. Donin, V.I., (0). Broadening ionic lines observed along the axis of a high-current discharge of an argon laser. OIS, v. 48, no. 6, 1980, 1065-1071.
83. Lis, L. (NS). Investigations of populations for $5s'[1/2]_1^0$ and $4p'[3/2]_2$ neon levels interacting with laser radiation at 633 and 3391 nm. APP, v. A56, no. 5, 1979, 655-659. (RZhF, 5/80, 5D1041)
84. Zabiyaikin, Yu.Ye. (7). Exhibition of "precision optical devices from the GDR". OMP, no. 5, 1980, 56-61.

d. N_2

85. Armichev, A.V., V.S. Aleynikov, and T.B. Fogel'son (0). High-power UV nitrogen laser with a transverse discharge and without gas flow. KE, no. 5, 1980, 1037-1041.
86. Budzyak, A., I.Ts. Ivanov, V.I. Lyashenko, V.A. Panyushkin, I.V. Falomkin, Z. Tsisek, and Yu.A. Shcherbakov (52). High-power pulsed UV nitrogen laser. Ob'yedinennyi institut yadernykh issledovaniy. Soobshcheniye, no. 13-12778, 1979, 8 p. (RZhF, 6/80, 6D1089)
87. Lisicki, E., and M. Lukaszewicz (NS). Influence of some cavity parameters on the experimental performance of nitrogen lasers. Opt app, no. 4, 1979, 243-248. (RZhRadiot, 6/80, 6Ye60)

e. Submillimeter

88. Rak, V.G., and S.F. Dyubko (34). Stark effect in submillimeter molecular lasers with optical pumping. KE, no. 6, 1980, 1227-1235.

f. Metal Vapor

89. Batenin, V.M., I.I. Klimovskiy, M.A. Lesnoy, and L.A. Selezneva (74). Plasma parameters in a discharge afterglow of a copper vapor laser. KE, no. 5, 1980, 988-992.
90. Bokhan, P.A., V.I. Silant'yev, and V.I. Solomonov (78). Mechanism for limiting the pulse repetition rate of a copper vapor laser. KE, no. 6, 1980, 1264-1269.
91. Gorshkov, V.A., and R.I. Sokolovskiy (152). Polarization of radiation during superluminescence. IVUZ Fiz, no. 5, 1980, 51-56.
92. Stroganov, V.V. (0). Frequency pulling at a double resonance in a thallium atomic beam tube. IVUZ Radiofiz, no. 3, 1979, 314-331.
(RZhRadiot, 5/80, 5Ye62)
93. Vayner, V.V., S.P. Zinchenko, I.G. Ivanov, and M.F. Sem (325). Pulsed ion metal vapor lasers with hollow cathodes. KE, no. 5, 1980, 1019-1027.

g. Gasdynamic

94. Achasov, O.V., P.A. Vityaz', S.A. Labuda, S.V. Popko, S. Sivets, N.A. Fomin, and V.K. Sheleg (180,549). Porous mixing devices for gasdynamic lasers with selective thermal excitation. I-FZh, v. 38, no. 6, 1980, 989-993.
95. Britan, A.B., and A.M. Starik (0). Resonant absorption of 10.6 μ radiation in mixtures of CO_2 - N_2 at the front of a shock wave. ZhPMTF, no. 3, 1980, 20-23.
96. Ktalkherman, M.G., V.M. Mal'kov, and N.A. Ruban (193). Effect of gasdynamic disturbances in a supersonic flow on the optical properties of a gasdynamic CO_2 laser inverted medium. TVT, no. 3, 1980, 572-576.
97. Volkov, A.Yu., A.I. Demin, and Ye.M. Kudryavtsev (1). Study on the possibility of developing an SO_2 gasdynamic laser. Fizicheskiy institut AN SSSR. Preprint, no. 3, 1980, 22 p. (RZhF, 6/80, 6D1103)
98. Yefimov, B.G., and L.A. Zaklyaz'minskiy (0). Analyzing the mixing process for a gas jet in a Laval nozzle and its effect on population inversion in a supersonic flow. FGiV, no. 3, 1980, 68-73.
99. Zarvin, A.Ye., and R.G. Sharafutdinov (0). Applicability of a model for forming a molecular beam under conditions of progressive nonequilibrium. MZhiG, no. 3, 1980, 170-173.

3. Excimer

100. Baranov, V.Yu., V.M. Borisov, Yu.Yu. Stepanov, and O.B. Khristoforov (23). Controlling the power spectrum of an XeF laser. KE, no. 6, 1980, 1375-1376.
101. Bersuker, I.B. (561). Origin of dynamic instability in molecular systems. TiEKh, no. 3, 1980, 291-299.
102. Glotov, Ye.P., V.A. Danilychev, A.I. Milanich, and A.M. Soroka (1). Volt-ampere characteristics of a self-contained electroionization discharge in three-component laser mixtures. ZhTF, no. 6, 1980, 1335-1337.
103. Kostin, M.N., V.F. Tarasenko, and A.I. Fedorov (466). Volumetric discharge from a dielectric surface in Ar and mixtures of Ar with Xe and CCl₄. ZhTF, no. 6, 1980, 1227-1230.
104. Vesselovskiy, V.V., and A.I. Nastyukha (0). Formation of XeF* exciplexes in a pulsed hollow cathode glow discharge plasma in a binary mixture of an inert gas and a halogen-carrier. ZhTF P, no. 12, 1980, 737-740.
105. Voytik, M.G. (1). Theoretical study on the kinetics of elementary processes in excimer lasers using mixtures of inert gases and mercury with halogens. Fizicheskiy institut AN SSSR. Dissertation, 1979, 19 p. (KLDV, 5/80, 6811)

4. Theory

106. Dem'yanov, A.V., I.V. Kochetov, Ye.A. Lapshina, A.P. Napartovich, A.F. Pal', A.F. Perevoznov, I.G. Persiantsev, V.G. Pevgov, and A.N. Starostin (0). Study on the energy characteristics and stability of a self-terminating discharge in mixtures of HCl with noble gases. ZhTF P, no. 10, 1980, 585-589.
107. Kosyrev, F.K., V.A. Timofeyev, A.K. Pekh, and A.P. Leonov (0). Flow-through gas laser. Otkr izobr, no. 23, 1980, 743092.
108. Mirinoyatov, M.M., and I.A. Solov'yev (227). Experimental determination of microwave power absorbed by a plasma. IAN Uz, no. 3, 1980, 91-93.
109. Zhankov, I.K. (336). High-speed generator of high-voltage nanosecond pulses. Author's certificate USSR, no. 351301, 25 Oct 1979. (RZhRadiot, 6/80, 6Ye73)

D. CHEMICAL LASERS

1. $F_2 + H_2(D_2)$

110. Bashkin, A.S., A.N. Orayevskiy, V.N. Tomashov, and N.N. Yuryshev (1). Energy parameters of H_2-F_2 , D_2-F_2 and $D_2-F_2-CO_2$ lasers with e-beam pumping. KE, no. 6, 1980, 1357-1359.

2. Photodissociative

111. Ivanov, V.S., A.S. Kozlov, A.M. Pravilov, and Ye.P. Smirnov (74).
Spectral dependences of the absolute quantum yields for the formation of $I(^2P_{1/2})$ and $I(^2P_{3/2})$ atoms during photolysis of organic iodides.
Part 2. CF_3I , C_2F_5I , C_3F_7I , CF_3CFICF_3 , $CF_3OCF_2CF_2I$. KE, no. 5, 1980, 993-1005.
112. Vinokurov, G.N., V.Yu. Zalesskiy, and P.I. Krepostnov (0).
Iodine laser with an optically thick medium and a pump lamp.
KE, no. 5, 1980, 944-952.

3. Transfer

4. $CS_2 + O_2$

113. Bystrova, T.V. (0). Vibrational relaxation in a superexcited diatomic molecular system. FGIV, no. 3, 1980, 78-81.
114. Dudkin, V.A. (0). Spectroscopic determination of relative concentrations of vibrationally excited CO molecules in a carbon disulfide flame. FGIV, no. 3, 1980, 73-78.

5. Miscellaneous

115. Kochelap, V.A., and L.Yu. Mel'nikov (6). Theory of light amplification in recombination reactions occurring in an adiabatic explosion in an exothermal mixture. Sb 1, 45-60.

116. Kupriyanov, N.L. (1). Theoretical study on the possibilities of developing chemical lasers using electron transitions. Fizicheskiy institut AN SSSR. Dissertation, 1979, 16 p. (KLDV, 6/80, 8150)

E. COMPONENTS

1. Resonators

a. Design and Performance

117. Bekshayev, A.Ya., and V.M. Grimblatov (240). Off-axis optical resonator with a lens-like medium. KE, no. 6, 1980, 1168-1179.
118. Bel'dyugin, I.M., and Ye.M. Zemskov (0). Evaluating the field in a laser resonator with a wavefront reversing mirror. KE, no. 6, 1980, 1334-1336.
119. Bel'dyugin, I.M., and Ye.M. Zemskov (0). Fields in a laser resonator with a wavefront reversing mirror. Sb 4, 160-169. (RZhF, 5/80, 5D1001)
120. Birman, A.Ya., Ye.A. Petrukhin, A.F. Savushkin, and Ye.N. Tropkin (0). Diffraction losses in an optical resonator. OIS, v. 48, no. 6, 1980, 1188-1194.
121. Bulyshev, A.Ye., G.A. Vedernikov, and N.G. Preobrazhenskiy (193). Evaluating the characteristics of a laser resonator. KE, no. 5, 1980, 1093-1095.

122. Lebedev, S.A., and B.Ya. Kogan (0). Parameters of light amplification during internal reflection from an inverted medium. Ois, v. 48, no. 5, 1980, 1030-1033.
123. Reznikov, M.G., and A.I. Khizhnyak (5). Properties of a resonator with a wavefront-reversing mirror. KE, no. 5, 1980, 1105-1108.
- b. Mode Kinetics
124. Bakhorin, V.A., Yu.N. Yepifanov, and A.S. Markin (161). Characteristics of giant pulses which develop out of free lasing. IVUZ Radiofiz, no. 5, 1980, 542-546.
125. Bakhvalov, N.S., V.A. Berenberg, and Ya.M. Zhileykin (2). Numerical calculation of the damping coefficients and modes of an open optical resonator. Tr 5, 190-193. (RZhF, 5/80, 5D1006)
126. Ishchenko, Ye.F., and G.S. Ramazanova (19). Complex Gaussian beams as a model for the natural waves of resonators with transverse inhomogeneity. Tr 6, 3-10.
127. Korniyenko, L.S., Ye.G. Lariontsev, and V.A. Sidorov (98). Theory on kinematic mode-lock in a solid state laser. KE, no. 6, 1980, 1213-1218.
128. Masloboyev, Yu.P., E.A. Poltoratskiy, R.A. Suris, and S.V. Shtofich (0). Semiconductor laser with longitudinal mode selection. ZhTF P, no. 12, 1980, 715-718.

2. Pump Sources

129. Bondarenko, A.I., F.K. Kosyrev, and V.A. Timofeyev (0). Electrode element for an electric discharge laser. Otkr izobr, no. 23, 1980, 743091.
130. Onik, K.Ch., and M.G. Shterev (NS). Device for optical pumping of a laser by solar energy. Author's certificate Bulgaria, no. 19762, 30 May 1978. (RZhRadiot, 5/80, 5Ye288)
131. Valyavko, V.V., B.V. Krylov, and A.A. Mozgo (0). Steady regulation of the pumping energy in pulsed lasers with an auxiliary storage tank. IAN B, no. 1, 1980, 112-116. (RZhF, 6/80, 6D1145)

3. Deflectors

132. Anan'yev, V., V. Domarkas, and S. Sayauskas (104). Bragg diffraction of a laser beam by a spherical acoustic field. Tr 7, 44-49.
133. Bansevichyus, R.Yu., A.V. Busilas, V.I. Alekseyenko, K.M. Ragul'skis, and M.A. Rytov (104). Two-coordinate scanning device. Author's certificate USSR, no. 688889, 30 Sep 1979. (RZhRadiot, 6/80, 6Ye136)
134. Deryugin, I.A., A.P. Pogibel'skiy, M.A. Talalayev, and G.E. Teterin (0). Producing wideband acoustooptic deflectors. KE, no. 5, 1980, 1127-1129.

4. Diffraction Gratings

135. Bobrov, S.T., M.M. Butusov, V.A. Ovchinnikov, Yu.G. Turkevich, and Yu.P. Udoyev (29). Diffraction of light by relief gratings in a region of total internal reflection. Tr 8, 74-78. (RZhF, 5/80, 5D1298)

5. Filters

136. Bugayev, V.A., and E.P. Shliteris (15). Working medium of a bleaching filter for a CO₂ laser with a passive Q-switch. Otkr izobr, no. 23, 1980, 743090.

6. Mirrors

137. Leshchev, A.A., P.M. Semenov, and V.G. Sidorovich (0). Effect of a Brillouin mirror on the parameters of laser radiation. Sb 4, 135-145. (RZhF, 5/80, 5D1114)
138. Lesnik, S.A., M.G. Reznikov, M.S. Soskin, and A.I. Khizhnyak (0). Structure of radiation in a laser with a wavefront-reversing mirror. Sb 4, 146-159. (RZhF, 5/80, 5D1131)
139. Lutter, A., and K. Ferencz (NS). Light scattering by dielectric mirrors. Kozponti fizikai kutate intezet (Publs), no. 6, 1980, 20 p. (RZhF, 6/80, 6D859)
140. Volyak, K.I., T.B. Volyak, I.K. Krasnyuk, and G.A. Lyakhov (1). Analyzing the shape of a thin film with fixed edges. Fizicheskiy institut AN SSSR. Preprint, no. 185, 1979, 23 p. (RZhF, 5/80, 5D1136)

7. Detectors

141. Astrov, Yu.A., A.Ya. Dovgiy, V.V. Yegorov, V.P. Lazarchuk, V.M. Murugov, L.G. Paritskiy, and Yu.N. Sheremet'yev (0). Developing a photorecorder of pulsed IR laser radiation in the 3.7 - 4.4 μ spectral range. Sb 2, 271-272. (RZhRadiot, 5/80, 5Ye342)
142. Biryulin, P.V. (0). Measuring the parameters of heterodyne IR photodetectors. PTE, no. 3, 1980, 193-196.
143. Biryulin, P.V. (0). Operating regimes of electrooptic modulators in a study of photodetector frequency characteristics. PTE, no. 3, 1980, 196-197.
144. Chernyakov, V.N., and V.I. Kukhtevich (0). Determining nonlinear properties of metal-oxide-metal diodes. IT, no. 6, 1980, 59-61.
145. Didyk, L.A. (0). Reaction of a liquid radiation-detector to a laser pulse. Sb 5, 105-110. (RZhF, 6/80, 6D1154)
146. Teslenko, A.I. (0). Vacuum device for preparing thin-film telluride photocells. IT, no. 5, 1980, 25-27.

8. Modulators

147. Aleksandrovskiy, A.L., A.I. Nagayev, I.I. Naumova, V.N. Parygin, and A.V. Frunze (2). Anisotropic electrooptic diffraction of light by ferroelectric domains. ZhTF, no. 6, 1980, 1351-1354.

148. Barnik, M.I., A.V. Ivashchenko, K.A. Kostylev, V.S. Malofeyev, and N.M. Shtykov (7). Fast response light modulator based on the twist effect in nematic liquid crystals. OMP, no. 5, 1980, 25-28.
149. Jankiewicz, Z., and Z. Trzesowski (NS). Generation of laser radiation during intermittent modulation of resonator losses. BWAT, no. 12, 1979, 99-114. (RZhF, 5/80, 5D1109)
150. Kovalev, A.A., G.L. Nekrasov, V.A. Pilipovich, Yu.V. Razvin, and S.V. Serak (0). Thermooptic phase modulation of light in liquid crystals. IAN B, no. 1, 1980, 109-112. (RZhF, 6/80, 6D1414)
151. Levchenko, Oleg, I., M.K. Rodionov, and Ol'ga I. Levchenko (106). Light modulator. Author's certificate USSR, no. 682858, 30 Aug 1979. (RZhRadiot, 6/80, 6Ye133)
152. Morozov, N.A., A.I. Rukavishnikov, and L.Yu. Zakharov (7). Study on the pulse characteristics of piezoceramic mirror correctors. OMP, no. 5, 1980, 6-8.
153. Prajzner, V. (NS). Switch for automatic compensation of a phase shift. Author's certificate Czechoslovakia, no. 179119, 15 Jun 1979. (RZhRadiot, 5/80, 5Ye272)

F. NONLINEAR OPTICS

1. Frequency Conversion

154. Abaliyeva, M.A., N.S. Bakhvalov, Ya.M. Zhileykin, and G.A. Lyakhov (0). Computer solution of problems on the opposed nonlinear interaction of three optical waves. Tr 5, 148-157. (RZhF, 5/80, 5D971)
155. Anan'yev, Yu.A., A.V. Gorlanov, N.I. Grishmanova, and N.A. Svetsitskaya (0). Self-compensation of optical inhomogeneities in an active medium by "reversal" during a three-wave interaction. Sb 4, 131-134. (RZhF, 5/80, 5D969)
156. Arakelyan, S.M., N.V. Tabiryan, and Yu.S. Chilingaryan (37). Second harmonic generation in a nematic liquid crystal. ZhTF, no. 6, 1980, 1328-1330.
157. Domnin, Yu.S. (1). Study on the synthesis of laser frequencies in the submillimeter and infrared ranges. Fizicheskiy institut AN SSSR. Dissertation, 1979, 14 p. (KLDV, 5/80, 6829)
158. Iskanderov, N.A., V.A. Kudryashov, and I.N. Matveyev (0). Four-photon resonant parametric upconversion of an IR signal frequency in a wideband pump field. KE, no. 6, 1980, 1348-1349.
159. Krivoshchekov, G.V., V.I. Samarin, S.G. Struts, and M.F. Stupak (75). Intracavity second harmonic generation in a ring laser with an external signal. KE, no. 5, 1980, 1123-1125.

160. Krivoshchekov, G.V., and V.I. Samarin (0). Effect of aberrations in an imaging optical system on nonlinear conversion of laser radiation. Ois, v. 48, no. 5, 1980, 963-967.
161. Liberts, G.V. (0). Study on second harmonic generation near a phase transition in oxy-octahedron ferroelectrics. Sb 6, 36-74. (RZhF, 6/80, 6Ye1658)
162. Masalov, A.V., and S.S. Todirashku (1). Role of the width and shape of the spectrum during nonlinear conversion of multifrequency laser radiation. Fizicheskiy institut AN SSSR. Preprint, no. 177, 1979, 34 p. (RZhF, 6/80, 6D920)
163. Nesterova, Z.V., I.V. Aleksandrov, I.V. Mel'nik, B.S. Neporent, D.K. Sattarov, and S.S. Safiulina (0). Fiber-optic Raman parametric light converter. ZhTF P, no. 11, 1980, 661-664.
164. Ovechko, V.S. (51). Parametric conversion of optical fields with upconversion in alkali metal crystals and vapors. Kiyevskiy GU. Dissertation, 1979, 11 p. (KLDV, 5/80, 6885)
165. Rostovtseva, V.V., S.M. Saltiyel, A.P. Sukhorukov, and V.G. Tunkin (2). Generating higher optical harmonics in focused beams. KE, no. 5, 1980, 1081-1088.
166. Stroganov, V.I., A.I. Illarionov, and V.I. Samarin (75). Conversion of incoherent radiation in a thermal imager with a nonlinear crystal. Sb 7, 134-140. (RZhF, 5/80, 5D1327)

2. Parametric Processes

167. Chmela, P. (NS). Efficiency of nonlinear optical processes with respect to photon statistics of the generating radiation. Opt app, no. 4, 223-231. (RZhF, 6/80, 6D989)
168. Ivanova, Z.I. (2). Study on parametric lasing and amplification in lithium meta-niobate crystals of high optical quality. Moskovskiy GU. Dissertation, 1979, 15 p. (KLDV, 5/80, 6837)
169. Ivanova, Z.I., A.I. Kovrigin, G.V. Luchinskiy, L.N. Rashkovich, N.M. Rubinina, and A.I. Kholodnykh (2). Growth and study of optical inhomogeneities in 45° LiNbO₃ crystals for use in IR parametric oscillators. KE, no. 5, 1980, 1013-1018.
170. Litvak, A.G., and V.A. Mironov (0). Thermal parametric instabilities in a plasma. Sb 8, 191-215. (RZhF, 6/80, 6Zh26)
171. Popov, A.K., and V.M. Shalayev (210). Non-Doppler transitions during resonant four-photon parametric processes. KE, no. 6, 1980, 1362-1364.

3. Stimulated Scattering

a. Raman

172. Dubetskiy, B.Ya. (210). Nonlinear resonance in the line shape of stimulated Raman scattering. Institut fiziki SOAN. Dissertation, 1979, 19 p. (KLDV, 5/80, 6831)

173. Gadomski, W., and M. Roman (NS). Study on the spatial distribution of anti-Stokes radiation of stimulated Raman scattering. APP, v. A56, no. 6, 1979, 831-834. (RZhF, 5/80, 5D953)
174. Kircheva, P.P. (NS). Stimulated resonance Raman scattering of fluorescent organic molecules. Bolgarskiy fizicheskiy zhurnal, no. 5, 1979, 573-585. (RZhF, 5/80, 5D952)
175. Kotov, A.V. (1). Tunable Raman lasers in the IR and their application. Fizicheskiy institut AN SSSR. Dissertation, 1979, 14 p. (KLDV, 6/80, 8146)
176. Valakh, M.Ya., Ya. Veshka, and A.P. Litvinchuk (6). Characteristics of resonant Raman scattering in ZnP_2 and CdP_2 single crystals. UFZh, no. 5, 1980, 850-852.
177. Zon, B.A., and Yu.N. Mitin (137). Nonlinear paramagnetic Faraday effect. ZhETF, v. 78, no. 5, 1980, 1718-1732.
- b. Brillouin
178. Baranova, N.B., and B.Ya. Zel'dovich (1). Wavefront reversal of focused beams (stimulated Brillouin backscattering theory). KE, no. 5, 1980, 973-982.
179. Basov, N.G., I.G. Zubarev, A.B. Mironov, S.I. Mikhaylov, and A.Yu. Okulov (1). Phase fluctuations of Stokes waves during stimulated light scattering. ZhETF P, v. 31, no. 11, 1980, 685-689.

180. Bespalov, V.I., A.A. Betin, G.A. Pasmanik, and A.A. Shilov (426).
Observing transient field oscillations in stimulated Brillouin scattering radiation. ZhETF P, v. 31, no. 11, 1980, 668-672.
181. Borisov, B.N., Yu.I. Kruzhilin, S.A. Nashchekin, V.K. Orlov, and S.V. Shklyarik (0). Nondestructive wavefront reversal of radiation during stimulated Brillouin scattering in glass. ZhTF, no. 5, 1980, 1073-1075.
182. Vasil'yev, M.V. (7,17), A.L. Gyuliameryan (17), A.V. Mamayev (17), V.V. Ragul'skiy (17), P.M. Semenov (7,17), and V.G. Sidorovich (7,17). Recording phase fluctuations of stimulated light scattering. ZhETF P, v. 31, no. 11, 1980, 673-677.
183. Zubarev, I.G. (0). Wavefront reversal by stimulated Brillouin scattering mirrors in high-power laser systems. Sb 4, 92-116. (RZhF, 5/80, 5D957)

4. Self-focusing

184. Zel'dovich, B.Ya., and T.V. Yakovleva (1). Distortions in a fine-structure wave pattern due to self-focusing nonlinearity. KE, no. 6, 1980, 1325-1327.

5. Acoustic Interaction

185. Balakshiy, V.I., V.N. Parygin, and L.Ye. Chirkov (2). Acoustooptic analyzer of a light-signal converter. TKiT, no. 5, 1980, 41-44.

186. Karabutov, A.A., Ye.A. Lapshin, G.P. Panasenko, and O.V. Rudenko (2). Generation of high-power sound pulses during laser heating of a surface. Tr 5, 174-183. (RZhF, 5/80, 5D1098)
187. Ostashev, V.Ye. (0). Change in the phase geometry of an optical beam during its diffraction by ultrasound. IVUZ Radiofiz, no. 11, 1979, 1356-1364. (RZhRadiot, 5/80, 5Ye22)
188. Pogibel'skiy, A.P. (0). Nonstationary acoustooptic interaction at a high intensity of light. ZhTF P, no. 10, 1980, 631-634.
189. Shcherbakov, A.S. (29). Calculating the parameters of acoustooptic interaction in crystals by a perturbation method. Tr 8, 54-61. (RZhF, 5/80, 5D853)

6. General Theory

190. Abramovich, B.S., and A.I. Saichev (0). Statistical description of waves in a nonlinear medium with one-dimensional random inhomogeneities. IVUZ Radiofiz, no. 11, 1979, 1334-1324. (RZhRadiot, 5/80, 5Ye20)
191. Akhmanov, A.S. (2). Multiphoton molecular excitation from several rotational states. VMU, no. 3, 1980, 24-30.
192. Akhmanov, S.A., V.M. Gordiyenko, V.V. Lazarev, A.V. Mikheyenko, and V.Ya. Panchenko (2). Nonlinear processes during vibrational-translational relaxation in a gas of strongly excited molecules. ZhETF, v. 78, no. 6, 1980, 2171-2189.

193. Andronova, I.A., Ye.A. Kuvatova, and Yu.A. Mamayev (426).
Independent nonlinear effects in an isotropic medium for randomly polarized opposed waves. KE, no. 6, 1980, 1331-1334.
194. Arakelyan, S.M., G.A. Lyakhov, and Yu.S. Chilingaryan (2,37).
Nonlinear optics of liquid crystals. UFN, v. 131, no. 1, 1980, 3-44.
195. Arakelyan, S.M., O.S. Yeritsyan, A.S. Karayan, and Yu.S. Chilingaryan (37). Optical characteristics of a layer of cholesteric liquid crystal in dielectric plates of finite thickness. Analysis for a loaded Fabry-Perot resonator. KE, no. 5, 1980, 959-972.
196. Areshev, I.P., M.G. Guseynaliyev, A.M. Danishevskiy, S.F. Kochegarov, and V.K. Subashiyev (4). Study on nonlinear absorption of light in InSb using a split beam method. FTT, no. 5, 1980, 1456-1462.
197. Bakay, A.S., K.A. Lukin, and V.P. Shestopalov (0). Nonlinear nonstationary theory of diffraction radiation oscillators. IVUZ Radiofiz, no. 9, 1979, 1117-1123. (RZhRadiot, 5/80, 5Ye21)
198. Bespalov, V.I., and G.A. Pasmanik (0). Brief review of problems [on wavefront reversal in nonlinear media]. Sb 4, 5-22. (RZhF, 5/80, 5D896)
199. Bespalov, V.I., A.A. Betin, S.N. Kulagina, A.Z. Matveyev, G.A. Pasmanik, and A.A. Shilov (0). Wavefront reversal of weak optical signals. Sb 4, 44-84. (RZhF, 5/80, 5D898)

200. Finkel'shteyn, V.Yu. (1). Evolution of a two-level system in a multifrequency external field. Fizicheskiy institut AN SSSR. Preprint, no. 170, 1979, 52 p. (RZhF, 5/80, 5D905)
201. Gel'mukhanov, F.Kh., and A.M. Shalagin (0). Photoinduced diffusion. Avtometriya, no. 3, 1980, 103-112.
202. Ginzburg, N.S. (0). Nonlinear theory on amplification and generation of electromagnetic waves by an anomalous Doppler effect. IVUZ Radiofiz, no. 4, 1979, 470-479. (RZhRadiot, 5/80, 5Ye19)
203. Grechushnikov, B.N., A.F. Konstantinova, I.D. Lomako, and I.N. Kalinkina (13,507). Optical activity and absorption in birefringent crystals at various polarization azimuths for incident light. Kristal, no. 3, 1980, 603-606.
204. Hegedus, E. (NS). An attempt to relate various kinds of coherent states. Sb 9, 45-51. (RZhF, 5/80, 5D900)
205. Ivakin, V.V., V.G. Koptev, A.M. Lazaruk, I.P. Petrovich, A.S. Rubanov, and B.I. Stepanov (3). Phase conjugation of optical fields during a nonlinear interaction in a bleachable medium. Institut fiziki AN BSSR. Preprint, no. 191, 1979, 9 p. (RZhF, 5/80, 5D945)
206. Kaniyazov, Sh., U. Nasyrov, and I.V. Fekeshgazi (0). Two-photon absorption spectrum of SbSI. Tr 9, 8-11. (RZhF, 5/80, 5D940)

207. Karabutov, A.A. (2). Excitation of nonlinear waves by distributed external sources in media without dispersion. Moskovskiy GU. Dissertation, 1979, 16 p. (KLDV, 5/80, 6849)
208. Klyshko, D.N. (2). Photons and nonlinear optics. Priroda, no. 5, 1980, 66-74.
209. Korobov, A.I. (2). Study on nonlinear properties of piezoelectric crystals. Moskovskiy GU. Dissertation, 1979, 13 p. (KLDV, 5/80, 6857)
210. Kremenitskiy, V.V. (5). Wavefront reversal during four-wave interaction in CdTe crystals. Institut fiziki AN UkrSSR. Preprint, no. 7, 1980, 28 p.
211. Kuz'min, V.S. (0). Superradiant echo signals in systems with a permanent dipole moment. DAN B, no. 2, 1980, 125-128. (RZhF, 6/80, 6D912)
212. Lebedev, A.K. (19). Nonlinear processes at transitions in a continuous spectrum. Tr 6, 69-78.
213. Lisitsa, M.P., and A.M. Yaremko (6). Raman scattering of light by polaritons at the Fermi resonance in crystals. Sb 1, 65-74.
214. Litvak, A.G. (0). Dynamic nonlinear electromagnetic phenomena in a plasma. Sb 10, 164-242. (RZhMekh, 6/80, 6B373)

215. Mayyer, A.A. (2). Nonlinear interaction of waves in media with a periodic structure under Bragg diffraction conditions. Moskovskiy GU. Dissertation, 1979, 14 p. (KLDV, 5/80, 6873)
216. Minasyan, V.V. (16). Coherent phenomena under conditions of two-photon resonance interaction of an ultrashort laser pulse with neodymium glass. Moskovskiy inzhenerno-fizicheskiy institut. Dissertation, 1979, 10 p. (KLDV, 6/80, 8159)
217. Mostowski, J. (NS). Coherent interaction of molecular vibrations with strong monochromatic laser light. The classical approach. APP, v. A56, no. 6, 1979, 857-869. (RZhF, 6/80, 6D910)
218. Mozol', P.Ye., I.I. Patskup, Ye.A. Sal'kov, N.S. Korets, and I.V. Fekeshgazi (6). Effect of the polarization type on nonlinear absorption of light in CdP₂. FTP, no. 5, 1980, 902-907.
219. Ragul'skiy, V.V. (0). Possibility of recording weak light absorption using wavefront reversal. ZhTF P, no. 11, 1980, 687-689.
220. Rautian, S.G., E.G. Saprykin, V.A. Sorokin, and A.M. Shalagin (75). Experimental observation of a sharpening of nonlinear resonances in intense laser fields. KE, no. 6, 1980, 1354-1356.
221. Savikhina, T.I. (492). Photon multiplication in metal oxide luminophors. Institut fiziki AN EstSSR. Dissertation, 1979, 15 p. (KLDV, 5/80, 6903)
222. Shepelev, A.V. (2). Nonlinear optical effects at a medium interface. VMU, no. 3, 1980, 90.

223. Tetyukhin, V.V. (0). Reflection of elliptically polarized waves from an interface with a nonlinear medium. Sb 11, 122-127. (RZhF, 5/80, 5D926)
224. Yelyutin, S.O., S.M. Zakharov, and E.A. Manykin (0). Superradiance in the r-f range, produced by optical pulses under conditions of a photon echo effect. IVUZ Radiofiz, no. 10, 1979, 1213-1217. (RZhRadiot, 5/80, 5Ye423)
225. Yershov, L.S., V.Yu. Zalesskiy, and V.N. Sokolov (0). Nonlinear transmission in a photodissociating gas. Ois, v. 48, no. 5, 1980, 864-869.
226. Zel'dovich, B.Ya., N.F. Pilipetskiy, A.N. Sudarkin, and V.V. Shkunov (0). Wavefront reversal by a surface. DAN SSSR, v. 252, no. 1, 1980, 92-95.
227. Zel'dovich, B.Ya., M.A. Orlova, and V.V. Shkunov (1). Nonstationary theory and evaluation of the transient period of a four-wave wavefront reversal. DAN SSSR, v. 252, no. 3, 1980, 592-594.
228. Zel'dovich, B.Ya., and V.V. Shkunov (0). Spatial-polarization reversal of a wavefront during a four-photon interaction. Sb 4, 23-43. (RZhF, 5/80, 5D897)
229. Zub, S.I., and A.S. Kleyman (0). Two-photon resonance in spaced coherent fields. IVUZ Radiofiz, no. 4, 1979, 505-506. (RZhF, 6/80, 6D937)

230. Zuykov, V.A., V.V. Samartsev, and R.G. Usmanov (38). Optical echo in ruby. ZhETF P, v. 31, no. 11, 1980, 654-659.

G. SPECTROSCOPY OF LASER MATERIALS

231. Aleksandrovskaya, N.G., V.K. Dobrokhotova, L.Ya. Malkes, Yu.V. Naboykin, L.A. Ogurtsova, and I.N. Chukanova (0). Electron vibrational spectra of diarylethylenes and diaryldivinylbenzenes in naphthalene crystals at 4.2 K. ZhPS, v. 32, no. 5, 1980, 799-807.
232. Gritsyna, V.T., T.I. Voytsenya, Ye.R. Dobrovinskaya, and A.V. Sikora (34). Quenching thermoluminescence in optically pumped $Al_2O_3:Cr$. UFZh, no. 5, 1980, 714-718.
233. Karyakin, A.V. (0). Structural luminescent spectra of some organic and inorganic compounds. ZhPS, v. 32, no. 5, 1980, 881-885.
234. Reva, M.G., B.D. Ryzhikov, and N.R. Senatorova (2). Reasons for decrease in absorptivity of dye molecules during association. VMU, no. 3, 1980, 63-67.

H. ULTRASHORT PULSE GENERATION

235. Abakumov, G.A., A.I. Antipov, and V.V. Fadeyev (2). Method and device for obtaining ultrashort pulses of laser radiation. Otkr izobr, no. 22, 1980, 644337.

236. Bareyka, B., G. Dikchyus, Ye.D. Isyanova, A. Piskarskas, and V. Sirutkaytis (0). Parametric generation of frequency tunable picosecond light pulses in proustite over the 3.7 - 10.2 μ range. ZhTF P, no. 11, 1980, 694-697.
237. Bareyka, B., G. Dikchyus, V.F. Kamalov, N.I. Koroteyev, A.S. Piskarskas, and V. Sirutkaytis (0). Picosecond lasing from color centers under synchronized pumping. Dynamics of F_2^+ centers during picosecond irradiation. ZhTF P, no. 11, 1980, 697-700.
238. Milinkevich, A.V. (0). Generating a subnanosecond pulse train in a solid state laser with a saturation absorber inserted in an external resonator. ZhPS, v. 32, no. 6, 1980, 992-997.
239. Tagiyev, Z.A., and A.S. Chirkin (86). Optimum length of ultrashort laser pulses during frequency multiplication. KE, no. 6, 1980, 1337-1339.

J. CRYSTAL GROWING

240. Tunik, T.A., L.A. Bezukladnikova, Ye.G. Grigor'yev, Yu.P. Udalov, and N.F. Fedorov (33,213). Determining the field of the initial crystallization phase in a $CdO-Nd_2O_3-WO_3$ system. Zhurnal neorganicheskoy khimii, no. 11, 1979, 3091-3095.

K. THEORETICAL ASPECTS OF ADVANCED LASERS

241. Andreyev, A.V., V.A. Bushuyev, and O.Yu. Tikhomirov (2). Mathematic models of the kinetics of gamma-radiation lasing and amplification. DAN SSSR, v. 252, no. 4, 1980, 845-848.

242. Belenov, E.M., and S.I. Vedeneyev (1). Stimulated emission of e-m waves by superconducting weakly coupled systems and metal-oxide-metal systems. KE, no. 6, 1980, 1350-1351.
243. Bushuyev, V.A., B.I. Mantsyzov, and R.N. Kuz'min (2). Effect of thermal expansion on the feasibility of gamma lasing. KE, no. 5, 1980, 1115-1117.
244. Grigor'yev, S.V. (19). Coherent channel for undulator radiation. Tr 6, 42-47.
245. Grigor'yev, S.V. (19). Effect of transverse motion of electrons in a beam on the amplification of radiation in an undulator. Tr 6, 47-53.
246. Kshevetskiy, S.A., M.L. Kshevetskaya, N.D. Raranskiy, and V.P. Shafranyuk (53). Characteristics of a beam circulating in a coplanar x-ray resonator. UFZh, no. 5, 1980, 781-787.
247. Rivlin, L.A. (141). Cosmic gamma-laser (hypotheses and evaluations). KE, no. 5, 1980, 1074-1080.
248. Tikhonov, A.N., V.A. Bushuyev, V.Ya. Galkin, R.N. Kuz'min, and O.Yu. Tikhomirov (0). Criteria of weak amplification in a quasi-classical model of the kinetics of a gamma laser. Sb 12, 121-125. (RZhF, 6/80, 6V133)

L. GENERAL LASER THEORY

249. Abakarov, D.I., and V.P. Oleynik (6). Theory of quantum processes in a dispersive medium separated from a vacuum of a plane boundary. Sb 1, 74-86.
250. Ambrazyavichene, V.S., and R.S. Brazis (50). Amplification of e-m waves when disturbed by full internal reflection from an inverted medium. Lit fiz sb, no. 3, 1980, 113-116.
251. Atsagortsyan, A.Z., and I.A. Nagibarova (0). Contribution of two-phonon Raman scattering processes to cooperative sensitization of luminescence. DAN B, no. 2, 1980, 143-146. (RZhF, 6/80, 6D678)
252. Bolotskikh, L.T., Yu.I. Geller, and A.K. Popov (210). Increase in resonant nonlinear susceptibility induced by polarization transfer during molecular collisions. KE, no. 5, 1980, 1098-1100.
253. Dobrokhotova, V.K., Yu.V. Naboykin, L.A. Ogurtsova, F.S. Pokrovskaya, and Yu.A. Tiunov (82). Stimulated emission at forbidden transitions in doped molecular crystals. ZhTF P, no. 9, 1980, 538-540.
254. Katulin, V.A. (1). Generation and amplification of high-power pulses of coherent radiation by modal lasers. Fizicheskiy institut AN SSSR. Dissertation, 1979, 25 p. (KLDV, 6/80, 8100)
255. Makovetskiy, A.A. (15). Evaluating the gain coefficient for an active medium by the kinetics of superluminescence quenching. KE, no. 5, 1980, 1006-1012.

256. Malkin, V.M. (0). Establishing the stationary spectrum of turbulence during three-wave decay of an interaction. IVUZ Radiofiz, no. 10, 1979, 1218-1222. (RZhRadiot, 6/80, 6Ye20)
257. Veklenko, B.A. (19). Statistical properties of a reflected electromagnetic field with a coherent component. Tr 6, 14-18.
258. Vinogradov, A.V., and V.N. Shlyaptsev (1). Evaluating the population inversion on transitions in the 200 - 2000 Å range for multicharged neon-like ions. KE, no. 6, 1980, 1319-1324.
259. Vishchakas, Yu.K. (506). Development of physics in Lithuania. Sb 13, 13-23.
260. Vlasov, S.N., and V.I. Talanov (0). Scattering of a signal wave by opposed pumping beams during the degeneration of a four-photon interaction. Sb 4, 85-91. (RZhF, 5/80, 5D995)
261. Zavorotnyy, V.U. (0). Four-point function of field coherence behind a phase screen in a region of severe fluctuations of the wave intensity. IVUZ Radiofiz, no. 4, 1979, 462-469. (RZhRadiot, 5/80, 5Ye18)

II. LASER APPLICATIONS

A. BIOLOGICAL EFFECTS

262. Kozionov, A.L., S.Yu. Novozhilov, V.Ye. Soloboyev, and M.I. Shtokman (75). Optically induced diffusion of DNA in solutions during laser incising. ZhETF P, v. 31, no. 10, 1980, 606-610.
263. Shamayeva, G.G., V.I. Chekhlov, and O.L. Pertsev (19). Dosimetric attachment to the "Pul'sar-2100". Tr 10, 27-29. (RZhRadiot, 5/80, 5Ye489)

B. COMMUNICATIONS SYSTEMS

264. Babkina, T.V., S.A. Bagayev, M.A. Beskorskaya, V.V. Grigor'yants, M.Ye. Zhabotinskiy, G.A. Ivanov, N.A. Koreneva, D.K. Sattarov, V.B. Smirnov, S.V. Shreyber, and K.M. Freyvert (15). Study on pulse widening in "Gradan" lightguides. KE, no. 5, 1980, 927-933.
265. Barachevskiy, V.A., V.V. Belov, Yu.A. Bykovskiy, V.M. Kozenkov, V.L. Smirnov, and O.I. Tolstopyatov (16). Laser radiation stabilizer based on an integrated optical electrochromatic cell. ZhTF, no. 6, 1980, 1362-1363.
266. Belanov, A.S., and Ye.M. Dianov (1). Reducing dispersion in optical three-layer waveguides. KE, no. 6, 1980, 1280-1286.

267. Belov, A.V., A.B. Grudinin, G.G. Devyatykh, Ye.M. Dianov, N.S. Karpichev, S.M. Mazavin, V.A. Myzina, V.B. Neustruyev, A.V. Nikolaychik, A.M. Prokhorov, N.I. Sokolov, and A.S. Yushin (297,1). Low-loss fiber-optic lightguide produced by axial deposition. KE, no. 5, 1980, 1133-1136.
268. Bykovskiy, Yu.A., V.S. Gerasimenko, A.V. Mironos, V.L. Smirnov, and V.V. Khiminets (16). Producing thin-film waveguides based on chalcogenide glassy semiconductors by laser sputtering. KE, no. 5, 1980, 1132-1133.
269. Dedlovskiy, M.M., I.P. Korshunov, and P.P. Shevchenko (0). Study on the coherence of the radiation field in a multimode optical fiber. Sb 2, 237. (RZhRadiot, 5/80, 5Ye200)
270. Denisyuk, Yu.N., G.B. Semenov, and V.V. Smirnov (7). Holographic correction of phase distortions of wavefronts passing through fiber components. Tr 11, 112-116. (RZhRadiot, 6/80, 6Ye397)
271. Dyachenko, A.A., Yu.S. Milyavskiy, S.R. Nanush'yan, K.V. Nikitin, Ye.I. Simanovskaya, S.Ya. Fel'd, and G.V. Shimayskaya (248,15). Effect of temperature on the optical characteristics of quartz glass - polymer lightguides. KE, no. 5, 1980, 1118-1120.
272. Grigor'yants, V.V., V.I. Smirnov, and Yu.K. Chamorovskiy (15). Study on backscattering during transmission of high-power light beams through multimode fiber optics. KE, no. 5, 1980, 1063-1066.

273. Karavanskiy, V.A., V.N. Morozov, Yu.M. Popov, and V.L. Smirnov (1). Study on a frequency-multiplexed data link. KE, no. 6, 1980, 1360-1362.
274. Krest'yaninov, A.S., and V.V. Mityugov (0). Minimum uncertainty in an open system. RiE, no. 5, 1980, 1030-1037.
275. Logginov, A.S., V.Ye. Solov'yev, Yu.F. Yul'berdin, and V.G. Yelenskiy (0). Injection lasers for fiberoptic communication lines. Zarubezhnaya radioelektronika, no. 3, 1980, 41-60. (RZhF, 6/80, 6D1185)
276. Mikaelyan, A.L. (0). Methods of evaluating focusing media with a variable index of refraction. RiE, no. 5, 1980, 897-911.
277. Takacs, S. (NS). Experiments in wideband communications in the optical frequency range. Hiradastechnika, no. 11-12, 1979, 350-355, 380, 382, 384. (RZhRadiot, 6/80, 6Ye296)
278. Yemel'yanov, A.V., Yu.P. Masloboyev, E.A. Poltoratskiy, R.A. Suris, A.N. Shokin, and S.V. Shtofich (0). Semiconductor laser for an integrated optical system. ZhTF P, no. 12, 1980, 718-721.
279. Zolotov, Ye.M., P.G. Kazanskiy, and V.A. Chernykh (1). Study on coupling tunnel radiation to diffuse LiNbO_3 waveguides. KE, no. 6, 1980, 1367-1370.

C. BEAM PROPAGATION

1. In the Atmosphere

280. Belen'kiy, M.S., and V.L. Mironov (78). Coherence of a laser beam field in a turbulent atmosphere. KE, no. 5, 1980, 1042-1047.
281. Bisyarin, V.P., I.P. Bisyarina, and G.K. Tret'yakov (15). Study on the attenuation of waves at 0.63 and 10.6 μ and the microstructure in stratus clouds at a high altitude over mountains. Institut radiotekhniki i elektroniki AN SSSR. Preprint, no. 27/283, 1979, 23 p. (RZhRadiot, 5/80, 5Ye295)
282. Dinichkin, S.A., and A.A. Tikhomirov (78,396). Field diaphragm for a lidar. Author's certificate USSR, 676962, 30 July 1979. (RZhGeofiz, 5/80, 5B109)
283. Gordin, M.P., A.V. Sokolov, and G.M. Strelkov (0). Propagation of high-power laser radiation in the atmosphere. Itogi nauki i tekhniki. VINITI. Radiotekhnika, no. 20, 1980, 206-289. (RZhF, 6/80, 6D877)
284. Kashkarov, S.S. (64). Study on intensity fluctuations of light and amplification of backscattering in a turbulent atmosphere. Institut fiziki atmosfery AN SSSR. Dissertation, 1979, 20 p. (KLDV, 6/80, 8142)
285. Kazaryan, R.A., and V.M. Dzhulakyan (59). Experimental study on longitudinal correlation of laser radiation in a turbulent atmosphere. IVUZ Radiofiz, no. 6, 1980, 718-720.

286. Kozubovskiy, V.R., Z.Y. Perchi, and G.D. Romanko (559).
Using lasers to analyze the degree of air pollution. Sb 1, 86-107.
287. Levin, B.V., B.M. Lysenko, and V.Ye. Rokotyan (0). Lidar methods for studying long waves on a sea surface. Sb 14, 154-158.
(RZhGeofiz, 6/80, 6V34)
288. Lukin, I.P. (78). Distribution of intensity averages in the focal plane of a lens. Sb 7, 121-124. (RZhF, 5/80, 5D884)
289. Lukin, I.P. (0). Study on the correlation of intensity fluctuations.
Deposit at VINITI, no. 772-80, 3 Mar 1980, 24 p. (RZhF, 6/80, 6D881)
290. Lukin, V.P., V.M. Sazanovich, and S.M. Slobodyan (78). Random image shifting during ranging in a turbulent atmosphere. IVUZ
Radiofiz, no. 6, 1980, 721-729.
291. Lukin, V.P. (78). Correcting for random angular misalignments of optical beams. KE, no. 6, 1980, 1270-1279.
292. Marichev, V.N., N.V. Nedel'kin, and A.V. Sosnin (78). Study on using a ruby laser for remote determination of atmospheric humidity profiles. IVUZ Fiz, no. 5, 1980, 112-114.
293. Milyutin, Ye.R. (0). Effect of large-scale inhomogeneities in the troposphere on the displacement of a laser "spot" in the focal plane of a receiving aperture. Tr 12, 16-20. (RZhRadiot, 5/80, 5Ye298)

294. Mironov, V.L. (132). Study on the fluctuations of a laser beam field in a turbulent atmosphere. Tomskiy GU. Dissertation, 1979, 36 p. (KLDV, 5/80, 6779)
295. Nazarov, I.M., Sh.D. Fridman, V.I. Rozhdestvenskaya, and V.F. Zhuravlev (0). Determining the mass concentration of aerosols in smoke plumes of industrial enterprises by means of a lidar. Meteorologiya i gidrologiya, no. 3, 1980, 24-32. (RZhGeofiz, 6/80, 6B73)
296. Prishivalko, A.P. (3). Effect of pulsed CO₂ laser parameters on the efficiency of water droplet destruction. I-FZh, v. 38, no. 6, 1980, 994-998.
297. Samokhvalov, I.V. (78). Effect of secondary scattering on the polarization characteristics of echo signals during laser probing of clouds. FAiO, no. 6, 1980, 591-600.
298. Svirgunov, P.N., Yu.S. Sedunov, and L.P. Semenov (220). Dispersal of a cloud medium accompanying an explosion of droplets. FAiO, no. 5, 1980, 483-489.
299. Zhukov, A.F., I.P. Lukin, and R.Sh. Tsvyk (78). Study on the internal magnitude of turbulence. Sb 7, 141-144. (RZhF, 5/80, 5D859)

2. In Liquids

300. Fadeyev, V.V., A.A. Demidov, D.N. Klyshko, O.I. Koblents-Mishke, and V.M. Fortus (69). Using laser spectroscopy to determine the pigments of marine phytoplankton. Tr 13, 219-235.
301. Prikhach, A.S., and V.P. Dik (0). Fluctuations of illumination at a considerable depth under a rough sea surface. IAN B, no. 1, 1980, 76-79. (RZhF, 6/80, 6D900)
302. Rentsch, S. (NS). Photoacoustic measuring method for determining slight linear and nonlinear absorptions in liquids. ETP, no. 6, 1979, 571-577. (RZhF, 6/80, 6D496)

3. Theory

303. Butylkin, V.S., V.S. Grigor'yan, and M.Ye. Zhabotinskiy (15). Four-wave interaction between successive ultrashort pulses in a medium. ZhETF, v. 78, no. 5, 1980, 1659-1671.
304. Galich, N.Ye. (29). Laser generated turbulence in a motionless and moving gas (or liquid). ZhTF, no. 6, 1980, 1196-1202.
305. Kagan, M.S., Ye.G. Landsberg, and I.V. Chernyshov (526). Surface waves at the boundary of a stationary domain. ZhETF P, v. 31, no. 9, 1980, 528-532.
306. Katsev, I.L (0). Radiation flux over an area of finite size in a scattering medium illuminated by a unidirectional point source. IAN B, no. 1, 1980, 66-70. (RZhF, 6/80, 6D899)

307. Kuznetsova, T.I. (1). Propagation of a light signal with pseudo-random spatial modulation through an amplifying medium. KE, no. 6, 1980, 1257-1263.
308. Molodtsov, S.N. (0). Calculating the covariant function of the intensity of an optical wave in a medium with large-scale random inhomogeneities. The cumulative approach. IVUZ Radiofiz, no. 6, 1979, 733-739. (RZhRadiot, 5/80, 5Ye301)
309. Ostashev, V.Ye. (118). Study on the propagation of waves in inhomogeneous media, defining the field in terms of the order of backscattering. Moskovskiy fiziko-tekhnicheskiy institut. Dissertation, 1979, 20 p. (KLDV, 5/80, 6886)
310. Petrushin, A.G. (220). Study on the attenuation and scattering of optical radiation in a medium with nonspherical particles. Institut eksperimental'noy meteorologii. Dissertation, 1979, 22 p. (KLDV, 6/80, 8177)
311. Saichev, A.I. (0). Calculating some corrections to a parabolic approximation of the quasioptics for the statistical description of waves propagating in randomly inhomogeneous media. IVUZ Radiofiz, no. 11, 1979, 1405-1408. (RZhRadiot, 5/80, 5Ye296)
312. Tarasov, R.P. (0). Propagation of Gaussian beams in plane-curved optical waveguides with a parabolic index of refraction profile. KE, no. 6, 1980, 1203-1208.

D. COMPUTER TECHNOLOGY

313. Babenko, N.K., and A.D. Kolomiyets (551). Interference copying of holographic memory microholograms by a reprojection method.
Sb 15, 33-39.
314. Deryugin, L.N., I.I. Kolbin, and I.V. Cheremiskin (14). Study of a two-frequency thin-film laser logic element. Deposit at VINITI, no. 549-80, 12 Feb 1980, 10 p. (RZhRadiot, 5/80, 5Ye393)
315. Dyn'kina, Ye.A., and R.A. Kraskovskiy (7). Characteristics of an optical objective system for coherent information processing.
OMP, no. 5, 1980, 17-20.
316. Gitlits, G.V., Yu.A. Grafshonkin, A.L. Tamarin, and V.N. Filinov (0). Device for recording and input of holographic information.
Sb 2, 243. (RZhRadiot, 5/80, 5Ye511)
317. Golovanevskiy, E.I., and S.P. Varshavskiy (110). Applying matrix methods to the analysis of polarized light in a discrete deflector.
IVUZ Priboro, no. 5, 1980, 74-78.
318. Ivanov, V.N., V.M. Nechayev, and V.V. Tsvetkov (209). Hologram recording in a permanent optoelectronic memory. Institut tochnoy i vychislennoy tekhniki AN SSSR. Preprint, no. 18, 1979, 17 p. (RZhRadiot, 6/80, 6Ye379)
319. Kazak, V.L., I.M. Nagibina, and D.N. Sitnik (30). Using spatial optical filtering in holographic interferometry. IVUZ Priboro, no. 5, 1980, 47-52.

320. Kiss, G., P. Varga, and Cs. Zakar (NS). Using holograms as conventional storers of information to store data. Fizikai szemle, no. 7, 1979, 243-248. (RZhF, 6/80, 6A66)
321. Kupriyanova, N.G., V.V. Nikitin, and G.I. Semenov (1). Study on the polarization of radiation of injection lasers for magnetooptic devices for information storage and processing. Fizicheskiy institut AN SSSR. Preprint, no. 173, 1979, 29 p. (RZhF, 5/80, 5D1022)
322. Mayorov, S.A., Ye.F. Ochinnikov, Yu.F. Romanov, and A.Yu. Tropchenko (30). Holographic memory with three-coordinate access using three-dimensional reflection Fourier holograms. IVUZ Priboro, no. 5, 1980, 42-46.
323. Mitsay, V.N., and V.B. Fedorov (0). Controlled image multipliers for optoelectronic memories. Part 1. Study on optical angular characteristics of an interference beam splitter with a polarization plane switch. KE, no. 5, 1980, 1028-1036.
324. Odulov, S.G., and M.S. Soskin (5). Correlation analysis of imaging formed by degenerate four-wave interactions of opposed waves. DAN SSSR, v. 252, no. 2, 1980, 336-339.
325. Petrov, M.P., V.I. Marakhonov, M.G. Shlyagin, A.V. Khomenko, and M.V. Krasin'kova (4). Using a "PRIZ" spatial image converter for information processing. ZhTF, no. 6, 1980, 1311-1314.

326. Yanyuk, V.I. (30). Evaluating the diffraction efficiency of magnetooptic information carriers in optoelectronic memories. IVUZ Priboro, no. 5, 1980, 78-80.

327. Yerko, A.I., and A.N. Malov (16). Optimizing the parameters for processing layers of chromated gelatin for recording optical information. ZhNiPFIK, no. 3, 1980, 185-187.

E. HOLOGRAPHY

328. Alishoyeva, A.B., G.I. Burdygina, T.G. Ovechkina, S.M. Papoyan, V.N. Chursin, and I.M. Fridman (231). Effect of atmospheric humidity on variation in the characteristics of a photosensitive layer with a holographic image. TKiT, no. 6, 1980, 19-22.

329. Andreyevskaya, T.M., Z.G. Pavlova, and M.A. Tronina (161). Obtaining holographic transmission characteristics. ZhNiPFIK, no. 3, 1980, 171-175.

330. Bletskan, D.I. (136). Photoconductivity spectra for GeS single crystals. FTP, no. 6, 1980, 1222-1224.

331. Davydov, A.M., I.A. Pan'shin, Ye.A. Podpalyy, T.F. Stankevich, and S.O. Shilyadov (308). Characteristics of recording holograms in MnBi media. ZhNiPFIK, no. 3, 1980, 176-179.

332. Denisyuk, Yu.N. (7). Some properties of the aspectogram as applied to the synthesis of composite holograms. Tr 11, 70-80. (RZhF, 6/80, 6D1201)

333. Gal'pern, A.D., and V.P. Bruy (0). Recording composite Fresnel holograms. OIS, v. 48, no. 6, 1980, 1177-1182.
334. Gusev, V.D., and V.Ye. Kunitsyn (2). Synthesized reconstruction of a wave field. DAN SSSR, v. 252, no. 4, 1980, 856-858.
335. Kakichashvili, Sh.D. (0). Reproducing the degree of polarization of a wavefront field by a polarization-holographic method. AN GruzSSR. Soobshcheniye, v. 96, no. 1, 1979, 73-76. (RZhF, 6/80, 6D1204)
336. Karnatovskiy, V.Ye., V.G. Remesnik, and V.G. Tsukerman (75). High efficiency holographic phase recording on chalcogenide films at high temperatures. KE, no. 5, 1980, 1110-1112.
337. Koreshev, S.N., and G.B. Semenov (0). Formation of astigmatic wavefronts using a holographic method. OIS, v. 48, no. 5, 1980, 968-974.
338. Kostanyan, A.A. (0). Effect of the finite dimensions of a readout aperture on the quality of diffuse holographic images. Sb 2, 233. (RZhRadiot, 5/80, 5Ye514)
339. Krumin', A.E. (109), and P. Guenter (Swiss). Stationary energy transfer between recording beams controlled by an external electric field during formation of holograms in KNbO_3 . KE, no. 5, 1980, 1129-1131.

340. Lekhtsiyer, Ye.N., B.M. Stepanov, and Ye.B. Shelemin (0).
Evaluating the feasibility of methods for measuring the parameters
of three-dimensional objects. ZhNIPFIK, no. 3, 1980, 231-234.
341. Lisyanskiy, B.Ye., P.A. Morozov, S.P. Morozova, and G.I. Rukman (0).
Holography in the far infrared region of the spectrum. Sb 2, 238.
(RZhRadiot, 5/80, 5Ye507)
342. Mayyer, B.O., and D.I. Stasel'ko (0). Using a holographic element
to study the holographic characteristics of photomaterials.
OIS, v. 48, no. 5, 1980, 1013-1016.
343. Podpalyy, Ye.A., S.O. Shilyadov, A.G. Kotys, A.M. Balbashov, and
A.Ya. Chervonenkis (19). Magneto optic controlled transparency in
a holographic self-correlating system. ZhTF P, no. 9, 1980, 530-533.
344. Shelishch, P.B. (0). Stages in the development of holography.
Sb 16, 118-121. (RZhF, 5/80, 5A10)
345. Shepelevich, V.V. (162). Formation of traveling intensity waves in
an optically active medium. ZhTF P, no. 12, 1980, 748-750.
346. Smekal, P. (NS). Holography and its application. Sb 17, 320-325.
(RZhF, 6/80, 6D1211)
347. Smirnov, A.P. (0). Synthesis of intermediate aspects based on the
Talbot effect. OIS, v. 48, no. 5, 1980, 980-982.
348. Sobolev, G.A., and O.B. Serov (231). Recording color-negative
holograms. ZhTF P, no. 12, 1980, 729-732.

349. Utyamyshev, I.R., B.P. Dzhugeli, and R.I. Utyamyshev (558).
Method of reconstructing transmission holograms. Otkr izobr,
no. 18, 1980, 734603.
350. Vakhtanova, L.P., L.Ya. Kaplun, T.A. Yanushevskaya, K.S. Bogomolov,
and E.A. Gruz (96). Study on the phase characteristics of type PL-3
holographic plates. ZhNiPFiK, no. 3, 1980, 217-220.
351. Vinetskiy, V.L., N.V. Kukhtarev, Ye.N. Sal'kova, and L.G.
Sukhoverkhova (5). Dynamic conversion mechanisms for coherent
light beams in CdS. KE, no. 6, 1980, 1191-1198.
352. Vodzinskiy, A.I., G.S. Zykov, and P.D. Korniyevskiy (118).
Methods for analyzing a deflector for controlling the rotation of a
wavefront in the exposure time of a hologram. Tr 14, 77-83.
(RZhRadiot, 5/80, 5Ye515)
353. Vodzinskiy, A.I., and Yu.V. Tovmach (118). Determining the
conditions for using a small-angle method to study two-phase media
in holography. Tr 14, 84-86. (RZhRadiot, 5/80, 5Ye517)
354. Yegiazaryan, A.M., and P.A. Bezirganyan (37). Possibility of
recording a short wave x-ray hologram. IAN Arm, no. 1, 1980, 35-43.
355. Zamanova, R.T., and Sh.S. Mamedov (60). Study on the optical
properties of GeSe₂. IAN Az, no. 1, 1980, 93-96.

F. LASER-INDUCED CHEMICAL REACTIONS

356. Al'tshuler, L.V., V.K. Ashayev, G.S. Doronin, A.D. Levin, O.N. Mironov, and L.S. Obukhov (0). Experimental study of the states in the chemical reaction zone of a detonation wave. Sb 18, 8-11.
357. Al'tudov, Yu.K., Yu.A. Bykovskiy, P.L. Gruzin, A.A. Kasimovskiy, I.D. Laptev, and Yu.V. Petrikin (16). Study on the structural state of tin atoms implanted in silicon. ZhTF P, no. 12, 1980, 752-756.
358. Angelov, D.A., P.G. Kryukov, V.S. Letokhov, D.N. Nikogosyan, and A.A. Orayevskiy (72). Selective interaction of ultrashort UV laser pulses with components of a macromolecule. KE, no. 6, 1980, 1304-1318.
359. Antonov, V.S., V.S. Letokhov, and A.N. Shibanov (72). Producing a photoionization mass-spectrum of polyatomic molecules by UV laser radiation. ZhETF, v. 78, no. 6, 1980, 2233-2237.
360. Ashkinadze, B.M., and I.M. Fishman (4). Study on electron-hole drops in germanium heated in a microwave field. Nonstationary state of nucleation. ZhETF, v. 78, no. 5, 1980, 1793-1810.
361. Bagratashvili, V.N., Yu.R. Kolomiyskiy, Ye.A. Ryabov, and A.I. Starodubtsev (0). Two-frequency dissociation of SF₆ molecules in a strong IR field of a CO₂ laser. KE, no. 5, 1980, 1100-1102.

362. Delone, N.B., V.A. Kovarskiy, A.V. Maslov, and N.F. Perel'man (1). Resonance ionization of atoms in the radiation field of a multi-frequency laser. Fizicheskiy institut AN SSSR. Preprint, no. 2, 1980, 21 p. (RZhF, 6/80, 6D34)
363. Gryn', V.I. (118). Numerical calculation on the problem of selectively heating a radiating gas by laser radiation. Tr 14, 145-147. (RZhRadiot, 5/80, 5Ye419)
364. Kampar, V.E., Ya.N. Partysh, and O.Ya. Neyland (166). Unconventional effect of laser photolysis on charge transfer complexes of dibenzotetrathiafulvalene-tetracyanoethylene in the charge transfer zone. IAN Lat, no. 3, 1980, 79-83.
365. Kapralova, G.A., L.Ye. Makharinskiy, Ye.M. Trofimova, and A.M. Chaykin (67). Measuring the isotope concentration of complex shaped reaction products during selective isotope excitation of molecules of one of the reagents. ZhETF P, v. 31, no. 9, 1980, 536-538.
366. Khafizova, N.A. (0). New analytical complex for monitoring the composition of matter. Pribory, sredstva avtomatizatsii i sistemy upravleniya. TS-4. Analiticheskiye pribory i pribory dlya nauchnykh issledovaniy. Ekspress-informatsiya, no. 3, 1980, 8 p.

367. Kowal, A.T., and B.B. Kedzia (NS). Vibrational spectra of transition metal coordination compounds with thio- and seleno-ligands. Part 17. Vibrational analysis of Pd(II) and Pt(II) chelates of 2,4-dithio-biuret and their N-deuterated derivatives. BAPS Chim, no. 5, 1979, 375-389. (RZhF, 6/80, 6D388)
368. Moskvitina, Ye.N., A.P. Nikonorov, and Yu.Ya. Kuzyakov (0). Reaction of boron trichloride with hydrogen, induced by 10.6 μ pulsed monochromatic radiation. ZhFKh, no. 3, 1980, 681-684. (RZhF, 6/80, 6D416)
369. Nikonorov, A.P., Ye.N. Moskvitina, and Yu.Ya. Kuzyakov (0). Spectral distribution of the intensity of visible luminescence in boron trichloride in a field of pulsed 10.6 μ monochromatic radiation. ZhFKh, no. 3, 1980, 685-688. (RZhF, 6-80, 6D768)
370. Pikayev, A.K. (287). Initial processes during radiolysis of water. KhVE, no. 3, 1980, 248-254.
371. Popov, A.K., A.M. Shalagin, V.M. Shalayev, and V.A. Yakhnin (210). Photoinduced diffusion of gases in a nonmonochromatic wave field. Institut fiziki SOAN. Preprint, no. 117, 1979, 6 p. (RZhF, 5/80, 5D1097)
372. Raytsimring, A.M., and Yu.D. Tsvetkov (295). Path length of slow electrons and the spatial distribution of ions, electrons and radicals in irradiated polar matrices. KhVE, no. 3, 1980, 229-238.

373. Strekalov, V.N. (161). Kinetics of endothermic reactions resulting from absorption of light. ZhTF, no. 5, 1980, 1067-1072.
374. Tolpygo, S.K., and V.A. Tulin (66). Superconducting aluminum film in a microwave field. ZhETF, v. 78, no. 6, 1980, 2352-2358.
375. Yeletskiy, A.V., V.D. Klimov, and T.A. Udalova (0). Two-level interaction of high-power CO₂ laser radiation with an SF₆ molecule. DAN SSSR, v. 252, no. 3, 1980, 589-592.

G. MEASUREMENT OF LASER PARAMETERS

376. Astakhov, V.V., R.M. Dolgopyatov, A.Ye. Karaul'nik, A.S. Kozakov, M.S. Kozintsev, A.F. Kotyuk, P.M. Sysenko, and A.A. Yakun'kin (0). Using piezoelectric quartz crystal temperature converters to measure the energy parameters of laser radiation. Sb 2, 269-270. (RZhF, 5/80, 5Ye314)
377. Avrutin, A.D. (0). Designing thin-film resistors for precision laser tuning. Sb 19, 98-105. (RZhRadiot, 6/80, 6Ye318)
378. Bautin, A.V., O.A. Loktev, V.A. Morozov, Yu.A. Polyakov, and A.K. Semenov (7). Energy calibrator for a multichannel space-time analyzer of laser radiation. OMP, no. 5, 1980, 35-36.
379. Bayanov, V.I., A.M. Dukhovnyy, A.Ye. Korolev, V.A. Serebryakov, and D.I. Stasel'ko (0). Holographic measurement of the spatial characteristics of subnanosecond light pulses. Sb 2, 244. (RZhRadiot, 5/80, 5Ye523)

380. Benditskiy, A.A., B.A. Mishke, I.B. Ovchinnikova, and G.I. Rukman
(0). Simple method for visualizing IR laser radiation. Sb 2, 255.
(RZhRadiot, 5/80, 5Ye343)
381. Benditskiy, A.A., B.A. Mishke, I.B. Ovchinnikova, and G.I. Rukman
(0). Using optically-excited sound waves to record the parameters
of laser radiation. Sb 2, 256. (RZhRadiot, 6/80, 6Ye235)
382. Bilenko, D.I., and B.A. Dvorkin (0). Measuring the nonstationary
polarization and energy parameters of laser radiation. Sb 2, 349.
(RZhRadiot, 6/80, 6Ye242)
383. Biryulin, V.P., and V.S. Galkin (0). Electronic accuracy control
of c-w IR laser absorptiometry. Sb 2, 276-277. (RZhRadiot, 6/80,
6Ye251)
384. Blaim, Z., T. Machowski, J. Malinowski, and B. Schneider (NS).
Monitoring the total pressure and composition of the gas mixture
in ar He-Ne laser by a spectroscopic method. BWAT, no. 12, 1979,
115-118. (RZhF, 5/80, 5D-127)
385. Bobrik, V.I., and Yu.F. Tomashevskiy (0). Method for tuning the
lasing line of a tunable laser at a determined point of the
spectrum. Sb 2, 293. (RZhRadiot, 5/80, 5Ye139)
386. Brodskiy, M.Yu., L.M. Zaytsev, V.M. Klyuchnikov, and V.S. Trichuk
(0). The RUL-2 recorder of the spatial distribution of pulsed laser
radiation. Sb 2, 261. (RZhRadiot, 6/80, 6Ye232)

387. Dolbilov, A.S., P.A. Pavlov, and V.Z. Shapoval (7). Study on oscillations in the discharge of industrial lasers. OMP, no. 6, 1980, 50-51.
388. Drozhbin, Yu.A., V.Ye. Prokopenko, L.A. Rass, B.M. Stepanov, and V.T. Yurov (0). Measuring the wavelength of tunable lasers. IT, no. 6, 1980, 26-28.
389. Dukhanina, M.I., A.V. Khromov, and A.P. Khrometskiy (0). Study on the efficiency of a ribbon-type instrument for measuring laser radiation energy. Sb 2, 258. (RZhRadiot, 5/80, 5Ye315)
390. Grigor'yants, V.V., M.Ye. Zhabotinskiy, and B.A. Kuzyakov (15). Measuring the cross section of the stimulated emission from a waveguide CO₂ laser. KE, no. 6, 1980, 1299-1303.
391. Grimblatov, V.M., and E.V. Moroz (0). Holographic analyzer for systems for stabilizing the spatial characteristics of gas laser radiation. Sb 2, 245. (RZhRadiot, 6/80, 6Ye399)
392. Grimblatov, V.M. (0). Spatial modulation in measurements of the characteristics of a laser beam. Sb 2, 264. (RZhRadiot, 6/80, 6Ye233)
393. Grimblatov, V.M., and V.V. Kulagin (0). Highly sensitive fast-response instrument for measuring the spatial characteristics of a laser beam. Sb 2, 275. (RZhRadiot, 5/80, 5Ye312)

394. Ignatovich, T.N., V.I. Sachkov, and B.M. Stepanov (0). Developing a project for the state standard on "means for measuring the parameters of laser radiation". General technical specifications. Sb 2, 303. (RZhRadiot, 5/80, 5Ye310)
395. Ionina, N.V., D.I. Stasel'ko, and V.L. Strigun (0). Holographic device for the photometry of partially coherent laser beams. Sb 2, 242. (RZhRadiot, 5/80, 5Ye522)
396. Ivlev, Ye.I. (34). Study on a method for measuring the power of optical radiation, using calorimeters with a mobile heat carrier. Khar'kovskiy GU. Dissertation, 1979, 22 p. (KLDV, 5/80, 6838)
397. Katrich, A.B., and V.M. Kuz'michev (0). Absorption of e-m energy by a metal cylinder. OIS, v. 48, no. 6, 1980, 1126-1129.
398. Khinrikus, Kh.V. (0). Methods for measuring laser noise. Sb 2, 295. (RZhRadiot, 6/80, 6Ye245)
399. Korotkov, A.M., and N.P. Soldatkin (0). Pulse and harmonic signal generators in the optical range. Sb 2, 336. (RZhRadiot, 6/80, 6Ye252)
400. Koryakovskiy, A.S., and V.M. Marchenko (1). Interferometry of optical inhomogeneities in laser active media using the Talbot effect. KE, no. 5, 1980, 1048-1057.
401. Kotyuk, A.F., and A.M. Raytsin (0). Method for measuring the angular divergence of a laser beam. Sb 2, 254. (RZhRadiot, 6/80, 6Ye230)

402. Kotyuk, A.F., A.A. Liberman, and O.I. Yakovleva (0). Study on the stability of the coefficient of reflection for surfaces of instruments for measuring the energy parameters of laser radiation. Sb 2, 259. (RZhRadiot, 5/80, 5Ye346)
403. Kotyuk, A.F., D.G. Levchenko, A.M. Raytsin, and N.Sh. Khaykin (0). Standards of "sharpness" and asymmetry as estimates of the parameters of the shape of the spatial distribution of laser radiation. Sb 2, 265. (RZhRadiot, 6/80, 6Ye231)
404. Kozintsev, M.S. (0). Monitoring device of extreme accuracy for measuring the spectral coefficients of absorption and diffuse reflection of c-w laser radiation. Sb 2, 327. (RZhRadiot, 5/80, 5Ye344)
405. Levchenko, D.G., and V.M. Rubinshteyn (0). Method for reducing the errors in devices for measuring the parameters of laser radiation. Sb 2, 313. (RZhRadiot, 6/80, 6Ye236)
406. Levchenko, D.G., and O.Ye. Marykivskiy (0). Device for measuring laser radiation fluctuations, and the device's attestation. Sb 2, 341. (RZhRadiot, 6/80, 6Ye244)
407. Malashkevich, G.Ye., and V.V. Kuznetsova (3). Method of measuring the probability of excitation energy transfer in donor-acceptor systems. Otkr izobr, no. 23, 1980, 742770.
408. Marykivskiy, O.Ye. (0). Reducing the errors in measuring the stability of laser output power. Sb 2, 342. (RZhRadiot, 6/80, 6Ye241)

409. Orayevskiy, A.N., and N.B. Rodionov (1). A systems approach to the use of lasers. KE, no. 5, 1980, 1108-1109.
410. Petru, F., Z. Vesela, and J. Fajt (NS). Method for regulating at least two parts of a capillary tube. Author's certificate Czechoslovakia, no. 179701, 15 July 1979. (RZhRadiot, 5/80, 5Ye283)
411. Pomeranskiy, A.A., Yu.F. Tomashevskiy, and A.K. Toropov (0). Method for measuring the wavelengths of pulsed lasers by a multibeam Fizeau interferometer. Sb 2, 289. (RZhRadiot, 5/80, 5Ye318)
412. Shakidzhanov, S.S. (0). Limit accuracy in measuring the parameters of a plane monochromatic light wave using optical heterodyning. KE, no. 5, 1980, 917-926.
413. Teslenko, A.I. (35). Measuring laser pulse power. PTE, no. 3, 1980, 255.
414. Voytovich, A.P., V.S. Kalinov, and V.M. Metel'skiy (3). Method for determining the coefficient of energy loss in a laser. Otkr izobr, no. 24, 1980, 744802.
415. Yefimov, V.F., N.G. Kokodiy, and V.N. Timoshenko (0). Laser radiation indicator in the infrared. Sb 2, 44. (RZhRadiot, 6/80, 6Ye243)

416. Yeliseyev, P.G., M.V. Yermakova, Ya.T. Zagorskiy, V.P. Strakhov, V.Ye. Stysin, S.V. Tikhomirov, N.P. Khatyrev, T.N. Khleskova, and V.A. Yakovlev (0). Highly stabilized source of average radiation power using an injection laser. Sb 2, 299. (RZhRadiot, 6/80, 6Ye107)
417. Yepishin, V.A., M.V. Neofitnyy, and V.M. Kuz'michev (0). Measuring the angular divergence of laser radiation by means of a diffraction coupler. Sb 2, 253. (RZhRadiot, 5/80, 5Ye309)
418. Yevseyev, I.V., V.M. Yermachenko, and V.A. Reshetov (16). Possibility of measuring population relaxation time, alignment and orientation using a photon echo method. ZhETF, v. 78, no. 6, 1980, 2213-2221.
419. Zhuravlev, E.N., L.N. Ivanov, and P.A. Todua (0). Electrooptic Franz-Keldysh effect in high-voltage measuring technology. IT, no. 5, 1980, 52-53.

H. LASER MEASUREMENT APPLICATIONS

1. Direct Measurement by Laser

420. Amirov, Yu.Ya. (4). Possibility of visually observing impurity disruptions in silicon. ZhTF, no. 11, 1980, 683-686.
421. Andrusenko, A.M., and V.F. Kravchenko (0). Calculating the basic correlations of resonator methods for measuring the speed of light and refractive index in a medium, allowing for the conductivity of the resonator walls. Sb 20, 3-17. (RZhRadiot, 5/80, 5Ye340)

422. Antoshin, M.K., I.V. Karpenko, O.I. Koval', M.M. Koltun, V.I. Petrov, and M.A. Stepovich (0). Raster electron microscopy of CdS photoelements. IAN Fiz, no. 6, 1980, 1290-1293.
423. Areshev, I.P., A.M. Danishevskiy, S.F. Kochegarov, and V.K. Subashiyev (0). Interference phenomena in split-beam measurements of two-photon absorption in crystals. Ois, v. 48, no. 5, 1980, 975-979.
424. Avatinyan, G.A., V.P. Vylegzhanin, V.V. Zosimov, A.S. Kolos, M.Ya. Tanayev, and Yu.M. Trifonov (7). Prototype optomechanical laser photorecorder. OMP, no. 5, 1980, 23-25.
425. Avramchenko, R.F. (133). Using the least-squares method in laser correlation anemometry. Sb 21, 124-132.
426. Bachevskiy, R.S., L.I. Muravskiy, and O.I. Kharlova (0). Study on the spatial-frequency structure of wavegrams. Sb 22, 3-10.
427. Baranov, P.A., and A.A. Solov'yev (2). Using a laser anemometer and probe to measure a laboratory model of a tornado. FAiO, no. 6, 1980, 656-660.
428. Borovtsov, P.V., S.F. Mikheyev, and Yu.M. Trunin (0). Measuring the oscillation amplitude of low-frequency quartz resonators by holographic interferometry. Sb 2, 234. (RZhRadiot, 5/80, 5Ye519)
429. Chernov, S.M., K.K. Zhilik, A.N. Lukomskiy, and P.I. Lamekin (0). Determining the refractive index for homogeneous cylindrical fibers. Ois, v. 48, no. 5, 1980, 987-991.

430. Chudinov, V.I. (0). Study on trimming of tantalum resistors by laser radiation. Sb 23, 31-36. (RZhRadiot, 5/80, 5Ye401)
431. Detinenko, N.Ye., A.L. Zhadkevich, A.A. Ivanov, Ye.A. Karpov, Yu.S. Nechayev, and T.G. Yakovleva (560). Laser device for graphic information readout. Institut fiziki vysokikh energiy. Serpukhov. Preprint, no. 172, 1979, 13 p. (RZhF, 5/80, 5D1152)
432. Dubnishchev, Yu.N., and Yu.G. Vasilenko (75). Laser Doppler velocimeter. Author's certificate USSR, no. 534985, 8 Nov 1979. (RZhRadiot, 6/80, 6Ye311)
433. Dworak, H.P. (NS). Time comparisons in the nanosecond range by laser synchronization using geostationary satellites. Nachrichten-technik-Elektronik, no. 1, 1980, 13-14. (RZhRadiot, 5/80, 5Ye334)
434. Dzhugeli, B.P. (558). Study on the possibilities of using optical holography to solve problems in medical diagnostics. VNI i ispytatel'nyy institut meditsinskoy tekhniki. Dissertation, 1979, 22 p. (KLDV, 6/80, 8615)
435. Gan, M.A., and V.S. Obraztsov (7). Comparative analysis of two coherent optical methods for obtaining the optical transfer function during the manufacture of filters for image quality enhancement. Tr 11, 89-100. (RZhF, 6/80, 6D1228)
436. Ginzburg, V.M., Ye.A. Kuznetsova, E.G. Semenov, and B.M. Stepanov (0). The MGI-3 three-way foreshortening holographic microscope. Sb 2, 239. (RZhRadiot, 5/80, 5Ye518)

437. Glasov, G.N., and G.M. Igonin (78). Photocurrent correlation function for an optical Doppler turbulent velocimeter. IVUZ Radiofiz, no. 6, 1980, 677-688.
438. Gonchukov, S.A., R.D. Kasumova, and Ye.D. Protsenko (0). Laser with controlled phase anisotropy for measuring the frequency characteristics of photodetectors in the visible range. Sb 2, 290. (RZhRadiot, 5/80, 5Ye320)
439. Gribkov, V.A., V.A. Veretennikov, N.V. Kalachev, V.P. Novikov, O.G. Semenov, and Yu.V. Sidel'nikov (1). Studying the discharge dynamics of a low-inductive vacuum spark by laser shadow methods. Fizicheskiy institut AN SSSR. Preprint, no. 178, 1979, 13 p. (RZhF, 5/80, 5G281)
440. Grigorov, D.Z. (NS). Device for functional laser adjustment of low-frequency analog integrated microcircuits. Author's certificate Bulgaria, no. 26325, 26 March 1979. (RZhRadiot, 5/80, 5Ye501)
441. Ivliyev, A.D., and V.Ye. Zinov'yev (42). Measuring thermal conductivity and thermal capacity by a thermal wave method using laser radiation and an amplitude-phase detector. TVT, no. 3, 1980, 532-539.
442. Kapustin, A.A., V.I. Razumovskiy, and G.B. Yatsevich (277). Spatial and spectral evaluation of a laser scanning video system. IVUZ Priboro, no. 6, 1980, 39-41.

443. Kazakov, Ye.N., Yu.V. Lisitsyn, and E.S. Putilin (30). Determining the thickness of the active zone in an optical switch. IVUZ Priboro, no. 6, 1980, 83-85.
444. Khoshev, I.M. (0). Theory on a ring laser with variable-sign frequency bias. KE, no. 5, 1980, 953-958.
445. Kiselev, N.G. (7). Choosing an optomechanical scanner system for a laser recording device. OMP, no. 5, 1980, 8-11.
446. Klimenko, M.M., R.Ye. Krzhizhanovskiy, and V.Ye. Sherman (0). Analysis of method inaccuracies in measuring thermal conductivity by a pulsed method using a laser. IT, no. 6, 1980, 40-42.
447. Klotyn'sh, E.E., M.Kh. Neykhart, and V.K. Petrov (427). Study on local electrophysical properties of semiconductors, using laser radiation. AN LatSSR. Izvestiya, no. 6, 1980, 88-104.
448. Kolmakov, I.A., V.V. Alpatov, N.N. Akmayev, and V.I. Volod'ko (0). Using a three-wave interaction to determine the local velocities of moving media. I-FZh, v. 38, no. 6, 1980, 1025-1030.
449. Kostylev, A.A., Ya.I. Londer, A.P. Terent'yev, K.N. Ul'yanov, and V.A. Fedorov (139). Electrical and energy characteristics of a periodic pulsed self-terminating discharge in a gas flow. TVT, no. 3, 1980, 475-482.
450. Kotkin, A.L., V.V. Mayorshin, and R.M. Umarchodzhayev (0). Single component quantum magnetometer with Hanle signal feedback. RiE, no. 5, 1980, 1037-1041.

451. Kotov, A.M. (7). Reproducing an original form using tone contrast reproduction. OMP, no. 5, 1980, 52-53.
452. Krayneva, N.V., S.A. Kuznetsova, and V.I. Smirnov (19). Study on the type of integral equation kernel for optical Doppler anemometry. Tr 6, 38-42.
453. Larionov, N.P., A.V. Lukin, and R.A. Rafikov (7). Using a synthesized hologram as a simulator for the main mirror of a telescope. OMP, no. 1, 1980, 39-41.
454. Lensometry by synthetic holograms. Bild und Ton, no. 1, 1980, 11-14, 32. (RZhRadiot, 6/80, 6Ye384)
455. Lukk, A.A., I.L. Nersesov, A.K. Pevnev, and S.L. Yunga (276). Contemporary motion of the western part of the Peter I range according to geodesic and seismographic data. AN SSSR. Izvestiya. Fizika Zemli, no. 5, 1980, 32-41.
456. Mikhaylova, T.P., M.A. Ivashechkina, and A.K. Toropov (129). Universal Fabry-Perot interferometer with laser pass-band stabilization. PTE, no. 3, 1980, 258.
457. Morozova, I.A. (246). Optical modeling of radio-telescope antennas. IVUZ Radiofiz, no. 6, 1980, 645-647.
458. Nasibov, A.S., A.N. Pechenov, Yu.M. Popov, and V.I. Reshetov (1). Study on the degradation of CRT laser screens. KE, no. 5, 1980, 1058-1062.

459. Naydenov, A.S. (0). Instrumental function of a Fabry-Perot interferometer during illumination by a Gaussian light beam. Sb 2, 282. (RZhRadiot, 6/80, 6Ye293)
460. Nikolayenko, A.N. (0). Spectroscopic characteristics of the methane resonance in an He-Ne/CH₄ ring laser. Sb 2, 300. (RZhRadiot, 5/80, 5Ye55)
461. Obratsov, V.S. (7). Image readout by means of coarse hologram-filters. Tr 11, 65-69. (RZhF, 6/80, 6D1213)
462. Pavelek, M., Z. Ramik, and V. Enenkl (NS). Using holographic interferometry to study temperature fields and heat transfer in cracks. Strojarenstvi, no. 1, 1980, 55-59. (RZhMekh, 5/80, 5V670)
463. Polyakov, P.V., L.A. Isayeva, N.L. Gron', S.Ye. Verem'yeva (369). Study on the temperature boundary layer near the electrode in melted electrolytes, using a holographic interferometry method. DAN SSSR, v. 252, no. 1, 1980, 146-149.
464. Pomeranskiy, A.A. (0). Distortions of an interference pattern of a Fabry-Perot interferometer with an optical wedge between the mirrors. Sb 2, 281. (RZhRadiot, 6/80, 6Ye294)
465. Popov, Ye.G. (556). Study on the effect of hemodynamics on the functional properties of blood platelets by laser photometry methods. Vsesoyuznyy kardiologicheskii nauchnyy tsentr AMN SSSR. Dissertation, 1979, 26 p. (KLDV, 6/80, 8380)

466. Pruss-Zhukovskiy, S.V., A.I. Senyukov, and A.I. Shishkin (29).
He-Ne minilaser for optical information processing systems.
Tr 8, 110-111. (RZhF, 5/80, 5D1366)
467. Reshetin, Ye.F. (19). Method of 4x4 beam matrices in paraxial optics. Tr 6, 32-37.
468. Sardyko, V.I. (3). Ring lasers with an anisotropic resonator.
Institut fiziki AN BSSR. Preprint, no. 193, 1980, 60 p.
(RZhF, 5/80, 5D1002)
469. Sattarov, F.A. (7). Reflecting optical surfaces formed by holographic methods. OMP, no. 6, 1980, 52-53.
470. Savel'yev, V.I. (16). Precision system for controlling a laser mirror scanner. Moskovskiy inzhenerno-fizicheskiy institut.
Dissertation, 1979, 19 p. (KLDV, 5/80, 7197)
471. Sergeyev, P.A. (7). Analysis of noise sources during holographic recording of the optical transfer functions of objectives.
Tr 11, 100-105. (RZhF, 6/80, 6D1227)
472. Sergeyev, P.A. (7). Determining the conditions for recording of hologram filters. Tr 11, 105-110. (RZhF, 6/80, 6D1230)
473. Sergeyev, P.A. (7). Determining the tolerable displacement of a holographic matched filter. Tr 11, 110-112. (RZhF, 6/80, 6D1231)

474. Shcherbachenko, A.M., and Yu.I. Yurlov (0). Electronic CAMAC modules for precision laser measuring and control systems. Avtometriya, no. 3, 1980, 33-40.
475. Simonenko, V.N. (0). Spectral transparency of dibasic powders. FGIV, no. 3, 1980, 141-143.
476. Solodov, A.P., and M.V. Spasskov (19). Experimental study on the condensation of a vapor jet in a liquid flow, using a method of local probing by a laser beam. Tr 15, 85-95.
477. Solodukhin, V.I., I.N. Mazhugin, A.L. Kuklinskiy, A.G. Kulyasov, L.Ye. Marasin, and A.Ya. Zhukov (0). Applying a laser aerial-profilograph to topographic studies of high-power line runs. Energeticheskoye stroitel'stvo, no. 6, 1980, 33-35.
478. Solomakha, D.A., and A.K. Toropov (0). The limit accuracy of measurements by a Fabry-Perot interferometer. Sb 2, 283. (RZhRadiot, 5/80, 5Ye341)
479. Subotinov, N.V., N.K. Vuchkov, and Ts.Kh. Vlaev (NS). Device for determining the optical quality of Brewster windows. Author's certificate Bulgaria, no. 26341, 26 Mar 1979. (RZhRadiot, 5/80, 5Ye400)
480. Tarasov, L.V., and V.A. Yezhov (0). Coherent optical processing of radio signals. Zarubezhnaya radioelektronika, no. 2, 1980, 3-37. (RZhRadiot, 5/80, 5Ye497)

481. Tomashevskiy, Yu.F., and A.A. Pomeranskiy (0). Optical formation of an interference pattern while recording the spectrum of coherent radiation in a Fabry-Perot interferometer. Sb 2, 280. (RZhRadiot, 5/80, 5Ye420)
482. Vasilenko, Yu.G., Yu.N. Dubnishchev, A.I. Zhilevskiy, and V.I. Titkov (75). Laser Doppler velocimeter. Author's certificate USSR, no. 529660, 8 Nov 1979. (RZhRadiot, 6/80, 6Ye310)
483. Vdovin, V.G., and A.A. Pustoshkin (0). Errors in a holographic method for determining the density and temperature of particles in open arcs. Sb 2, 235. (RZhRadiot, 5/80, 5Ye520)
484. Vedernikov, V.M., V.N. V'yukhin, V.P. Kir'yanov, V.P. Koronkevich, F.I. Kokoulin, A.I. Lokhmatov, V.I. Nalivayko, A.G. Poleshchuk, G.G. Tarasov, A.M. Shcherbachenko, V.A. Khanov, and Yu.I. Yurlov (75). Kinoforms. Precision photoplotter for synthesizing optical elements. Institut avtomatiki i elektrometrii SOAN. Preprint, no. 93, 1980, 39 p. (RZhF, 6/80, 6D1345)
485. Vinogradov, V.V. (459). Research and development of methods for geodetic measurements using scattered laser radiation. Moskovskiy institut inzhenerov zemleustroystva. Dissertation, 1979, 22 p. (KLDV, 6/80, 8695)
486. Vlasov, L.V., A.A. Liberman, and L.N. Samoylov (0). Measuring the radiation coefficients of high-temperature materials. Sb 24, 50-56. (RZhF, 6/80, 6D815)

487. Vlasov, N.G., R.V. Ryabova, and A.Ye. Shtan'ko (7). Using a GOR type laser in interference measurements based on speckle photography. OMP, no. 5, 1980, 34-35.
488. Volkov, I.V., and I.S. Klimenko (118). Some characteristics for production and interpretation of speckle-interferograms of deformed objects. ZhTF, no. 5, 1980, 1038-1043.
489. Vorob'yev, V.V., V.A. Kapitonov, E.P. Kruglyakov, and Yu.A. Tsidulko (79). Study on breakdown of water in a system with diffuse electrodes. ZhTF, no. 5, 1980, 993-999.
490. Vorob'yev, Yu.V., and V.A. Zhukov (7). Problems of reconstructing electron-microscopy images. Tr 11, 5-11. (RZhF, 6/80, 6Zh795)
491. Voronin, Yu.M., and R.Yu. Khaytlina (0). Recording an electron microscope image on an initially-charged liquid dielectric. IAN Fiz, no. 6, 1980, 1180-1183.
492. Voytovich, A.P., I.P. Mazan'ko, and V.I. Sardyko (3). Method for frequency discrimination of opposed waves in a ring laser. Author's certificate USSR, no. 687508, 25 Sep 1979. (RZhRadiot, 5/80, 5Ye326)
493. Yermolayev, M.M., and T.M. Ponomarenko (7). Holographic matched filters. Tr 11, 1979, 80-89. (RZhF, 6/80, 6D1229)
494. Zhimerin, D.G. (0). Laser leveler. Tekhnika i nauka, no. 5, 1980, 13.

495. Zlatskiy, V.T., and R.N. Ovsyannikov (133). Rao-Kramer limits for estimates of the signal parameters of laser Doppler velocimeters. Sb 21, 73-80.
496. Zolotarev, V.M. (0). Nature of losses in the surface layer of optical materials for the 1.06 - 10.6 μ IR range. ZhPS, v. 32, no. 6, 1980, 1096-1103.
497. Zubov, V.A., A.V. Krayskiy, and T.T. Sultanov (1). Energy characteristics of a system for correlation processing of optical information in a dual-beam interferometer system. Fizicheskiy institut AN SSSR. Preprint, no. 11, 1980, 27 p. (RZhRadiot, 5/80, 5Ye499)
498. Zuyev, V.V., N.I. P'yanykh, and I.M. Sal'nikov (0). Studies in the electromagnetic compatibility of optoelectronic equipment. Zarubezhnaya radioelektronika, no. 3, 1980, 3-15. (RZhRadiot, 6/80, 6Ye7)

2. Laser-Excited Optical Effects

499. Adukov, A.D., B.M. Atayev, and R.A. Rabadanov (534). Dynamics of recombination radiation in epitaxial layers of zinc oxide. FTT, no. 6, 1980, 1858-1861.
500. Agre, M.Ya., and L.P. Rapoport (0). Sub-barrier resonances in an inelastic channel during slow atomic collisions in a laser field. OIS, v. 48, no. 5, 1980, 1023-1026.

501. Agre, M.Ya., and L.P. Rapoport (137). Radiative combination of atoms into molecules during slow collisions in a laser field. ZhETF, v. 78, no. 6, 1980, 2190-2203.
502. Aleksandrov, I.N., and T.T. Bykova (12). Ion emission from a CdSe surface under the action of laser radiation at various wavelengths. ZhTF, no. 6, 1980, 1266-1269.
503. Andrianov, A.V., P.M. Valov, V.L. Sukhanov, V.V. Tuchkevich, and N.M. Shmidt (4). Photoeffect using a silicon p-n junction under conditions of intraband heating of carriers by light. FTP, no. 5, 1980, 859-864.
504. Andrianov, A.V., P.M. Valov, and I.D. Yaroshetskiy (4). Sign inversion for a "linear" photogalvanic effect in semiconductors. ZhETF P, v. 31, no. 9, 1980, 532-535.
505. Antipin, A.A., and V.S. Zapasskiy (0). Spin inversion in a $\text{CaF}_2\text{-U}^{3+}$ crystal during unpolarized optical pumping under conditions of cross-relaxation. FTT, no. 5, 1980, 1316-1350.
506. Belousov, A.V., V.A. Kovarskiy, and E.P. Sinyavskiy (44). Optical properties of molecules in a low-frequency resonant laser field. ZhETF, v. 78, no. 5, 1980, 1649-1658.
507. Dianov, Ye.M., V.I. Masychev, V.G. Plotnichenko, and V.K. Sysoyev (1). Measuring the coefficient of volume and surface absorption for highly transparent solids in the region of CO laser radiation. KE, no. 6, 1980, 1342-1345.

508. Dianov, Ye.M., A.I. Mitichkin, A.N. Panova, V.G. Plotnichenko, V.K. Sysoyev, and L.V. Udovichenko (1). Measuring the coefficient of volume and surface absorption for highly transparent solids in the region of CO₂ laser radiation. KE, no. 6, 1980, 1345-1347.
509. Geller, Yu.I., V.F. Lukinykh, A.K. Popov, and V.V. Slabko (210). Experimental detection of induced self-ionization-like resonances in a continuum. Institut fiziki SOAN. Preprint, no. 116, 1979, 10 p. (RZhF, 5/80, 5D943)
510. Gel'mukhanov, F.Kh., and A.M. Shalagin (75). Phenomenon of photoinduced gas diffusion. ZhETF, v. 78, no. 5, 1980, 1674-1686.
511. Gerasimov, A.L., A.A. Gutkin, and A.A. Rogachev (4). Long-wave photoeffect coupled to the boundary condition at a semiconductor-dielectric interface in a metal-semiconductor structure based on GaAs with an interstitial oxide layer. ZhTF P, no. 12, 1980, 760-764.
512. Grekhov, I.V., and L.A. Delimova (4). Auger recombination in silicon. FTP, no. 5, 1980, 897-901.
513. Kalinin, V.N., and V.A. Fromzel' (0). Thermal liberation in yttrium-erbium glasses during laser and flashlamp pumping. ZhTF, no. 5, 1980, 1030-1033.
514. Kirichenko, I.K., V.Ye. Novikov, V.P. Seminozhenko, and V.L. Shestopalov (36). Nonequilibrium states of superconductors using narrow-band nonequilibrium sources. Fizika nizkikh temperatur, v. 6, no. 5, 1980, 572-581.

515. Korol'kov, V.I., and V.S. Yuferev (4). Evaluation of solar energy converters based on smooth AlGaAs heterostructures under intense irradiation. FTP, no. 6, 1980, 1064-1070.
516. Kostyshin, M.T., and V.S. Severin (6). Effect of semiconductor optical constants on imaging in a semiconductor-metal system. ZhTF, no. 6, 1980, 1340-1343.
517. Manenkov, A.A., S.P. Smolin, and S.Yu. Sokolov (1). Conductivity of electron-hole drops in germanium. DAN SSSR, v. 252, no. 6, 1980, 1376-1378.
518. Martynovich, Ye.F., and V.M. Sapozhnikov (313). Luminescence of diamond under laser excitation. Deposit at VINITI, no. 514-80, 12 Feb 1980, 11 p. (RZhF, 5/80, 5D728)
519. Nemenov, V.A. (188). Absorption of laser radiation by ion crystals. Tr 1, 55-59. (RZhF, 6/80, 6D1166)
520. Petrov, M.P., and A.I. Grachev (4). Three-dimensional photogalvanic effects in sillenite type crystals. FTT, no. 6, 1980, 1671-1675.
521. Shchedrina, L.V. (5). Nonlinear pyroelectric effect in ferro-electrics. Institut fiziki AN UkrSSR. Preprint, no. 6, 1980, 40 p.
522. Sirota, N.N., and E.Z. Katsnel'son (0). Photogalvanomagnetic effects in ferrites. PSS, v. A56, no. 1, 1979, K61-K64. (RZhF, 5/80, 5Ye1379)

523. Zaretskiy, D.F. (23). Strong electromagnetic fields in nuclear physics. Sb 13, 459-464.

3. Laser Spectroscopy

524. Abdurakhmanova, Sh.A., and A.K. Atakhodzhayev (235). Effect of temperature on the linewidth of Raman scattering in solutions. Tr 16, 63-66. (RZhF, 5/80, 5D355)
525. Aktsipetrov, O.A., V.M. Ivanov, and A.N. Penin (2). Frequency-angle spectrum of polariton scattering and interference of susceptibilities of various levels. ZhETF, v. 78, no. 6, 1980, 2309-2315.
526. Aver'yanov, Ye.M., A.Ya. Korets, and V.F. Shabanov (210). Study on conformational motion of mesophase molecules using an optical probe method. ZhETF, v. 78, no. 6, 1980, 2374-2385.
527. Auzin'sh, M.P., I.Ya. Pirags, R.S. Ferber, and O.A. Shmit (109). Direct measurement of the thermalization rate for the ground state of K_2 molecules. ZhETF P, v. 31, no. 10, 1980, 589-592.
528. Bayev, V.M., S.A. Kovalenko, E.A. Sviridenkov, A.F. Suchkov, and D.D. Toptygin (1). Multichannel recording of absorption spectra obtained by intracavity laser spectroscopy. KE, no. 5, 1980, 1112-1115.
529. Belousov, M.V., Ye.A. Ivanova, D.Ye. Pogarev, and S.V. Pogarev (32). Reconstructing the phase density from the single phonon spectrum of a mixed crystal. ZhETF P, v. 31, no. 12, 1980, 717-719.

530. Belyy, M.U., I.V. Zakharchenko, and B.A. Okhrimenko (51).
Effect of alkali metal cations on the spectrum and kinetics of luminescence in HCl-Bi³⁺ solutions. UFZh, no. 5, 1980, 739-744.
531. Bez'yazychnyy, N.A., V.F. Kamalov, N.I. Koroteyev, L.B. Meysner, and N.G. Khadzhitskiy (2). Determining the properties of the Raman scattering tensor of rare-earth ion electron levels using nonlinear polarization spectroscopy. ZhTF, no. 6, 1980, 1316-1319.
532. Borisov, B.D., and A.Yu. Gusev (0). Method for smoothing out spectral characteristics. ZhPS, v. 32, no. 5, 1980, 833-838.
533. Brivina, L.P., N.S. Strokach, D.N. Shigorin, and M.V. Gorelik (0).
Study on the electron and vibrational absorption spectra of 1,10-anthraquinone derivatives. ZhFKh, no. 2, 1980, 349-353.
(RZhF, 6/80, 6D337)
534. Bulatov, Ye.D., D.N. Kozlov, Ye.A. Otlivanchik, P.P. Pashinin, A.M. Prokhorov, I.N. Sisakyan, and V.V. Smirnov (1). Automated high-resolution CARS spectrometer and coherent Raman spectroscopy of tetrahedral molecules. KE, no. 6, 1980, 1294-1299.
535. D'ordyay, V.S., I.V. Galagovets, Ye.Yu. Peresh, Yu.V. Voroshilov, V.S. Gerasimenko, and V.Yu. Slivka (0). Vibrational spectra of MPS₄ (M - In, Ga, Sb, Bi). Zhurnal neorganicheskoy khimii, no. 11, 1980, 2886-2891.
536. D'ordyay, V.S., Ye.Yu. Peresh, Yu.V. Voroshilov, and V.Yu. Slivka (136). Raman spectra of TlPbI₃ single crystals. FTT, no. 6, 1980, 1609-1612.

537. Finkel'shteyn, V.Yu. (1). Two-level system in a resonant multi-frequency field. ZhETF, v. 78, no. 6, 1980, 2138-2156.

538. Ignat'yev, B.V., V.F. Kalabukhova, V.V. Osiko, and A.A. Sobol' (1). Raman spectrum of $(1-X)\text{ZrO}_2\text{-XHfO}_2$ solid solutions as a function of concentration. FTT, no. 5, 1980, 1524-1526.

539. Kitayeva, V.F., N.N. Sobolev, I.L. Chistyy, Ye.V. Zharikov, V.V. Osiko, M.I. Timoshechkin, and A.S. Zolot'ko (1). Molecular scattering in erbium-doped garnets. FTT, no. 5, 1980, 1379-1383.

540. Klimov, V.D., V.A. Kuz'menko, V.A. Legasov, and T.A. Udalova (0). Sensitized luminescence in VF_5 irradiated by a pulsed CO_2 laser. ZhPS, v. 32, no. 6, 1980, 1009-1013.

541. Korableva, S.L., A.K. Kupchikov, M.A. Petrova, and A.I. Ryskin (0). Phonon and electron Raman scattering of light in LiTmF_4 and LiYbF_4 crystals. FTT, no. 6, 1980, 1907-1909.

542. Korniyenko, V.P., V.D. Kotsubanov, A.N. Letuchiy, and O.S. Pavlichenko (82). Study on transition processes during pumping of atomic hydrogen in a resonant plasma, using laser radiation. Fizika plazmy, no. 3, 1980, 658-662.

543. Koyava, V.T., V.I. Popechits, and A.M. Sarzhevskiy (0). Intermolecular interactions and their effect on fluorescence as a function of spectral-polarization. Ois, v. 48, no. 5, 1980, 896-902.

544. Koyava, V.T., V.I. Popechits, and A.M. Sarzhevskiy (0). Concentrated depolarization of fluorescence in systems with inhomogeneously broadened electron levels. ZhPS, v. 32, no. 6, 1980, 1023-1029.
545. Kozulin, A.T., and V.I. Karmanov (0). Frequency pulling of crystal lattice vibrations for solving the reverse spectral problem of XY_3 type pyramidal molecules. TIEKh, no. 1, 1980, 97-102. (RZhF, 6/80, 6D484)
546. Krutyakova, V.P., and V.N. Smirnov (0). Luminescent spectra in volumetric alkali-halide crystals containing absorbing inhomogeneities during irradiation by a CO_2 laser. ZhPS, v. 32, no. 6, 1980, 1002-1008.
547. Maksimov, A.A., and I.I. Tartakovskiy (0). Luminescence and light scattering in anthracene crystals under conditions of resonant excitation. ZhPS, v. 32, no. 5, 1980, 886-890.
548. Manakov, N.L., and V.D. Ovsyannikov (0). Nonresonant three-photon scattering of light by atoms. Cross-section for transitions between states of opposite parity. OIS, v. 48, no. 5, 1980, 838-844.
549. Mikhaylova, T.P., V.N. Sorokin, L.A. Sakayova, Yu.A. Fedorov, V.I. Bobrik, and A.K. Toropov (0). Device for studying the molecular scattering spectra of laser radiation. IT, no. 6, 1980, 28-30.
550. Orlova, N.D., and L.A. Pozdnyakova (0). Study on vibrational and rotational spectra of H_2 and D_2 in solutions at temperatures from 90 - 313 K. OIS, v. 48, no. 6, 1980, 1086-1093.

551. Piotrovskiy, Yu.A., and Yu.A. Tolmachev (0). Spectroscopic study on plasma formed by a powerful electron flux in an inert gas. ZhPS, v. 32, no. 6, 1980, 974-978.
552. Poletayev, A.V., N.F. Prokopyuk, and S.Z. Shmurak (66). Evolution of exciton reflection spectra of zinc sulfide crystals in structural transition processes. FTT, no. 6, 1980, 1909-1912.
553. Polivanov, Yu.N., and K.A. Prokhorov (1). Characteristics of Raman scattering in lithium formate crystals. FTT, no. 5, 1980, 1316-1323.
554. Ponath, H.E. (NS). Stationary and nonstationary nonlinear optical spectroscopy of surface polaritons. Annalen der Physik, no. 4, 1979, 253-265. (RZhF, 5/80, 5D257)
555. Rubinov, A.N., B.A. Bushuk, and A.P. Stupak (0). Kinetics of dichroism induced in a dye solution by a pulse of linearly polarized UV light. ZhPS, v. 32, no. 6, 1980, 1117-1119.
556. Semenov, A.Ye., and Ye.V. Cherkasov (535). Polarized Raman spectra of lithium niobate crystals doped with iron. FTT, no. 6, 1980, 1892-1894.
557. Sidorov, S.V., and A.I. Khizhnyak (5). Role of spatial inhomogeneity in methods of intracavity spectroscopy. KE, no. 6, 1980, 1161-1167.
558. Sokolov, V.B., V.G. Tsinoyev, and A.V. Ryzhkov (23). Mossbauer effect and vibrational spectra of AuF_5 and $\text{KrF}_2 \cdot \text{AuF}_5$. TiEKh, no. 3, 1980, 345-350.

559. Tusov, V.B., B.N. Korvatovskiy, V.Z. Pashchenko, and L.B. Rubin (2).
Nature of chloroplast fluorescence in the 735 nm region at room and
low temperatures. DAN SSSR, v. 252, no. 6, 1980, 1500-1504.

560. Zhizhin, G.N., and M.N. Popova (0). Using a Fourier spectrometer
to record Raman scattering. ZhPS, v. 32, no. 6, 1980, 1110-1113.

J. BEAM-TARGET INTERACTION

1. Metal Targets

561. Karas', V.I., S.S. Moiseyev, and A.P. Shuklin (34). Universal
nonequilibrium distributions of particles in finite energy intervals.
UFZh, no. 5, 1980, 820-825.

562. Korneyev, V.V., F.K. Kosyrev, S.F. Moryashchev, and A.A. Ukradizhenko
(0). Some dependencies of laser thermal processing. FikHOM, no. 3,
1980, 3-6.

563. Rovinskiy, R.Ye., V.Ye. Rogalin, V.M. Rozenberg, and M.D. Teplitskiy
(0). Changes in the structure of a copper-chromium alloy irradiated
by a CO₂ laser pulse. FikHOM, no. 3, 1980, 7-11.

564. Zinov'yev, A.V., B.V. Lugovskoy, and M.K. Pavlichenko (202).
Distortions in the shape of a short pulse of a convection current
during electron transit in a diode system. ZhTF, no. 5, 1980,
1025-1029.

2. Dielectric Targets

565. Bagdasarov, Kh.S., N.V. Belugina, G.V. Gomelauri, and A.A. Manenkov
(1). Resistance of YAG and LiNbO_3 crystals to giant pulse YAG:Er^{3+} laser radiation at 2.94 μ . KE, no. 6, 1980, 1351-1353.
566. Belaya, A.N., Ye.R. Dobrovinskaya, L.A. Litvinov, and E.I. Chernyakov (0). Structure defects arising in ruby single crystals under the action of laser radiation. FikHOM, no. 3, 1980, 12-15.
567. Kanevskaya, Ye.A. (287). Physicochemical laws on the damage of polymer coatings under the action of optical radiation. Institut fizicheskoy khimii AN SSSR. Dissertation, 1979, 53 p. (KLDV, 6/80, 8201)
568. Kovalev, A.A., B.I. Makshantsev, N.F. Pilipetskiy, Yu.V. Sidorin, and O.G. Stonik (17). Accumulation effects and time dependence of the optical breakdown threshold for solid transparent dielectrics during interaction with coherent radiation. KE, no. 6, 1980, 1287-1293.
569. Levin, A.B., and M.F. Dubovik (188). Damage to lithium niobate crystals under the action of intense laser radiation. Tr 1, 75-78. (RZhF, 5/80, 5Yel135)
570. Migolinet, I.M., Yu.Yu. Firtsak, I.V. Smaga, N.I. Dovgoshey, and G.P. Grechko (136). Bleaching of YIG in the near infrared. Sb 1, 107-111.

571. Mikla, V.I., M.V. Potoriy, D.G. Semak, and A.A. Kikineshi (0).
Study on the photosensitivity of glasses of the Cu-P-Se system.
Deposit at VINITI, no. 536-80, 12 Feb 1980, 8 p. (RZhF, 5/80,
5Ye1862)

3. Semiconductor Targets

572. Arutyunyan, G.M., and D.G. Akopyan (521). Evaluation of spatial dispersion during interaction of powerful e-m waves with two-band semiconductors. IAN Arm, no. 2, 1980, 79-85.
573. Katsnel'son, A.A., O.V. Kantur, and N.K. Sorokina (532). Mosaic structure characteristics of the laser interaction zone in silicon single crystals. FTT, no. 6, 1980, 1802-1807.

4. Miscellaneous Studies

574. Abrosimov, V.M., and V.V. Shein (118). Heating a metal film-semiconductor system with the radiation from a laser operating in various regimes. TVT, no. 3, 1980, 577-580.
575. Aleskovskaya, A.A., A.A. Gorbachev, R.R. Larina, and L.I. Mirkin (0).
Some optical and spectral characteristics of transparent materials after the action of gamma radiation and laser radiation. Sb 25, 82-88. (RZhF, 6/80, 6Ye2168)
576. High-power lasers. Nauka i zhizn', no. 5, 1980, 21-26, 84-85.
577. Kachurin, G.A., Ye.V. Nidayev, R.N. Lovyagin, and A.I. Popov (0).
Laser annealing of silicon implanted in small doses. Sb 26, 172-181. (RZhF, 6/80, 6Ye976)

AD-A105 585 DEFENSE INTELLIGENCE AGENCY WASHINGTON DC DIRECTORAT--ETC F/G 20/5
BIBLIOGRAPHY OF SOVIET LASER DEVELOPMENTS, NUMBER 47 MAY - JUN--ETC(U)
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578. Khaybullin, I.B., Ye.I. Shtyrkov, M.M. Zaripov, R.M. Bayazitov, and R.V. Aganov (0). Influence of the laser energy density and initial temperature of the sample on the electrical properties of ion implanted silicon layers. Sb 26, 233-250. (RZhF, 6/80, 6Ye979)
579. Pechorskiy, U.I., V.B. Zlokazov, and L.Ya. Kobelev (0). Effect of optical damage in proustite (Ag_3AsS_3) single crystals. Sb 27, 153-156. (RZhF, 5/80, 5D1105)
580. Rogalin, V.Ye., N.A. Tishchenko, and M.P. Shaskol'skaya (152). Interaction of an IR pulse with color centers in NaCl. ZhTF, no. 5, 1980, 1077-1079.
581. Rysakov, V.M., and V.I. Korotkov (4). Light scattering at the onset of destruction in alkali-halide crystals under the action of laser radiation. ZhTF P, no. 11, 1980, 681-683.

K. PLASMA GENERATION AND DIAGNOSTICS

582. Aleksandrov, V.V., V.D. Vikharev, P.G. Koval'skiy, M.I. Pergament, and A.M. Rubenchik (23). Absorption of laser radiation in a plasma with a less-than-critical density. Institut atomnoy energii. Preprint, no. 3196, 1979, 16 p. (RZhF, 6/80, 6D1111)
583. Andreyev, N.Ye., V.L. Artsimovich, Yu.S. Kas'yanov, V.V. Korobkin, V.P. Silin, P.V. Silin, and G.L. Stenchikov (1). Suppressing second harmonic generation in a dispersing laser plasma. ZhETF P, v. 31, no. 11, 1980, 639-642.

584. Arsenin, V.Ya., A.L. Galkin, and V.V. Korobkin (1). Possibility of determining the spatial distribution of ionic temperature in a plasma. KE, no. 6, 1980, 1219-1226.
585. Artemenkov, L.I., N.V. Ivanov, A.M. Kakurin, L.I. Molotkov, A.N. Silayev, A.N. Chudnovskiy, and N.N. Shvindt (23). Effect of a feedback system on the plasma parameters in a TO-1 tokamak. Fizika plazmy, no. 3, 1980, 630-638.
586. Askar'yan, G.A., and N.M. Tarasova (1). Photoreactive acceleration of particles and plasma production during the interaction of a laser beam with a cloud of dust. ZhTF P, no. 11, 1980, 656-661.
587. Bakeyev, A.A., L.I. Nikolashina, and N.V. Prokopenko (0). Propagation of laser absorption waves under the action of 10.6 μ radiation. KE, no. 6, 1980, 1236-1241.
588. Baksht, R.B., B.A. Kablambayev, and N.A. Tatakhin (466). Formation of a vacuum spark plasma channel. ZhTF, no. 6, 1980, 1350-1351.
589. Basov, N.G., B.L. Vasin, A.A. Galichiy, A.Ye. Danilov, B.Yu. Ivanov, M.P. Kalashnikov, B.V. Kruglov, Yu.A. Mikhaylov, V.P. Osetrov, V.N. Puzyrev, A.V. Rode, S.M. Savchenko, G.V. Sklizkov, V.M. Solodkov, S.I. Fedotov, V.A. Tsitovich, and L.I. Shishkina (1). Study on the amplification module of the "Del'fin" device for heating a thermonuclear plasma. Fizicheskiy institut AN SSSR. Preprint, no. 5, 1980, 44 p. (RZhF, 6/80, 6G273)

590. Bedilov, M.R., T.G. Tsoy, A.N. Ishmuratov, and M.S. Sabitov (0).
Photon emission during the interaction between multicharged Ti ions in a laser plasma and a CuBe surface. OIS, v. 48, no. 5, 1980, 1011-1013.
591. Belik, V.P., S.V. Bobashev, M.P. Kalashnikov, Yu.A. Mikhaylov, A.V. Rode, G.V. Sklizkov, S.I. Fedotov, and L.A. Shmayenok (1).
Photoionization method for absolute measurements of x-ray fluxes in a laser plasma. Fizicheskiy institut AN SSSR. Preprint, no. 202, 1979, 12 p. (RZhF, 5/80, 5G209)
592. Bernshtam, V.A., and I.P. Panchenko (82). Modulation instability in a collision plasma. Fizika plazmy, no. 3, 1980, 546-550.
593. Bonch-Bruyevich, A.M., O.I. Kalabushkin, L.N. Kaporskiy, and V.S. Salyadinov (0). Anisotropy of radiation scattering in a laser spark plasma. ZhTF P, no. 11, 1980, 667-671.
594. Bychkova, L.P., A.V. Kalinin, and I.M. Rutkevich (74). An MHD model for converting the energy in a plasma from a thermonuclear microexplosion. DAN SSSR, v. 252, no. 3, 1980, 586-589.
595. Bykovskiy, Yu.A., V.B. Lagoda, and G.A. Sheroziya (16).
Spatial distribution of ion emission from a laser-initiated slightly inductive discharge. ZhTF, no. 6, 1980, 1357-1358.
596. Charakhch'yan, A.A. (0). Calculating the laser compression of a spherical target, allowing for self-radiation in the plasma. Sb 28, 58-75. (RZhMekh, 6/80, 6B334)

597. Derzhiyev, V.I., A.Yu. Zakharov, and G.I. Ramendik (71). Effect of the chemical composition on the kinetics of ionization and recombination in a spark and laser plasma. Institut prikladnoy matematiki AN SSSR. Preprint, no. 23, 1979(1980), 22 p. (RZhF, 6/80, 6G60)
598. Derzhiyev, V.I., V.S. Marchenko, and S.I. Yakovlenko (184). Sustained dispersion of plasmoids in a vacuum. ZhTF P, no. 10, 1980, 605-608.
599. Dobrokhotov, Ye.I., D.P. Petrov, A.M. Solntsev, A.M. Stefanovskiy, A.F. Shcherbak (23). Plasma energy lifetime as a function of pinch ellipticity in a T-8 device. ZhETF P, v. 31, no. 11, 1980, 663-667.
600. Dolgoplov, Yu.V., Yu.F. Kir'yanov, S.B. Kormer, G.G. Kochemasov, S.M. Kulikov, V.D. Nikolayev, and S.A. Sukharev (0). Study on wavefront reversal during stimulated Brillouin scattering and its use in devices for laser fusion. Sb 4, 117-130. (RZhF, 5/80, 5D958)
601. Dremine, M.M., A.M. Solntsev, and A.M. Stefanovskiy (23). Ohmic heating of a plasma in a device with a spatial axis. Fizika plazmy, no. 3, 1980, 642-652.
602. Dubinina, Ye.A., and S.M. Faynshteyn (185). Modulation instabilities in a plasma located in a field of strong circularly polarized waves. IVUZ Radiofiz, no. 5, 1980, 628-629.

603. Gorbunov, L.M., and A.S. Shirokov (1). Stimulated Raman scattering spectrum from a laser plasma. Fizika plazmy, no. 3, 1980, 663-669.
604. Kalinin, S.V., and P.V. Minayev (74). Experimental study on the optical properties of a low temperature neon plasma. Diagnostics and analysis of a nonequilibrium state in the plasma. TVT, no. 3, 1980, 453-460.
605. Kashnikov, G.N., V.K. Orlov, A.N. Panin, A.K. Piskunov, and V.A. Reznikov (0). Characteristics of radiation in the 200-250 nm range from a quartz-restricted plasmadynamic discharge. KE, no. 6, 1980, 1340-1342.
606. Kirkin, A.N. (118). X-radiation in a plasma produced by high-power picosecond ruby laser pulses. Moskovskiy fiziko-tekhnicheskiy institut. Dissertation, 1979, 17 p. (KLDV, 5/80, 6852)
607. Kirkin, A.N., A.M. Leontovich, A.M. Mozharovskiy, and Ye.N. Ragozin (1). X-ray line spectra of a plasma produced by picosecond ruby laser pulses. Fizicheskiy institut AN SSSR. Preprint, no. 163, 1979, 16 p. (RZhF, 5/80, 5G284)
608. Kneipp, H. (NS). Device for diagnosing a laser plasma by scattered light. Patent GDR, no. 137300, 22 Aug 1979. (RZhRadiot, 5/80, 5Ye355)

609. Kononov, E.Ya., K.N. Koshelev, U.I. Safronova, Yu.V. Sidel'nikov, and S.S. Churilov (72). Spectroscopic measurement of electron density in a low-inductance vacuum spark "hot point" plasma. ZhETF P, v. 31, no. 12, 1980, 720-723.
610. Kormer, S.B., G.G. Kochemasov, S.M. Kulikov, Val.D. Nikolayev, Vik.D. Nikolayev, and S.A. Sukharev (0). Using stimulated Brillouin scattering for pulse sharpening and intercascade emission in laser fusion experiments. ZhTF, no. 6, 1980, 1319-1321.
611. Kozlovskiy, K.I., Yu.P. Kozyrev, A.S. Tsybin, and A.Ye. Shikanov (16). Using a laser plasma anode in an ionic diode with magnetic insulation. ZhTF, no. 6, 1980, 1212-1215.
612. Kurochkin, Yu.V., O.N. Lazutkin, N.Yu. Pakhomov, A.V. Pustogarov, V.V. Ukolov, and O.S. Shan'gin (0). Study on the properties of an inversion medium in a plasmatron channel. TVT, no. 3, 1980, 469-474.
613. Litvinenko, A.G., and V.M. Osadchiyev (0). Breakdown of an Ar-Ne mixture by a laser pulse. Ois, v. 48, no. 6, 1980, 1200-1203.
614. Petviashvili, V.I., and E.I. Yurchenko (0). Soviet-Japanese seminar on nonlinear phenomena in a plasma. Atomnaya energiya, v. 48, no. 5, 1980, 350-351.

615. Samarskiy, A.A., and S.P. Kurdyumov (0). Nonlinear processes in a dense plasma and their role in the problem of controlled laser fusion. Sb 29, 18-28. (RZhMekh, 6/80, 6B356)
616. Timoshchenko, V.N., and O.I. L'vov (12). Self-modeling dispersion of a partially ionized laser plasma. ZhTF, no. 5, 1980, 976-984.
617. Ulybin, S.A., and V.D. Chernetskiy (19). Development and testing of a heat switch for a cryostat for use in experiments with a laser plasma. Tr 17, 114-119.
618. Zorev, N.N., G.V. Sklizkov, and A.S. Shikanov (1). Observing a nonlinear thermal conductivity effect in a shock wavefront at velocities of 10^7 - 10^8 cm/sec. ZhETF P, v. 31, no. 10, 1980, 610-614.

III. MONOGRAPHS, BOOKS, CONFERENCE PROCEEDINGS

619. Abdullayev, G.B., E.Yu. Salayev, and V.M. Salmanov (60).
Vzaimodeystviye lazernogo izlucheniya s poluprovodnikami tipa $A^{III}B^{VI}$
(Interaction of laser radiation with type $A^{III}B^{VI}$ semiconductors).
Institut fiziki AN AzSSR. Baku, Elm, 1979, 139 p.
620. Ablekov, V.K., Yu.N. Denisov, and V.V. Proshkin (0). Khimicheskiye
lazery (Chemical lasers). Edited by V.S. Avduyevskiy (0). Moskva,
Atomizdat, 1980, 224 p.
621. Fizika plazmy. 1-y Sovetsko-Frantsuzskiy seminar, Moskva, 20-22
noyabr' 1978 (Plasma physics. 1st Soviet-French seminar, Moscow,
20-22 November 1978). Institut vysokikh temperatur AN SSSR. Moskva,
1979, 222 p. (RZhF, 6/80, 6G503)
622. Fotometriya i yeye metrologicheskoye obespecheniye. 3-ya Vsesoyuznaya
nauchno-tehnicheskaya konferentsiya. Tezisy dokladov (Photometry
and its metrological accuracy control. 3rd All-Union scientific and
technical conference. Summaries of the reports). VNII optiko-
fizicheskikh izmereniy. Moskva, 1979, 413 p. (RZhRadiot, 5/80,
5Ye339)
623. Golograficheskiye metody obrabotki informatsii (Holographic methods
for information processing). Moskovskiy institut radiotekhniki,
elektroniki i avtomatiki. Mezhvuznyy sbornik nauchnykh trudov.
Edited by D.I. Mirovitskiy (161), et al. Moskva, 1978, 207 p.
(KL, 24/80, 22182)

624. Golografiya i stereokino (Holography and stereo-cinematography).
VNI kinofotoinstitut. Trudy, no. 98, 1979, 118 p. (Cited in
TKiI, no. 6, 1980
625. Gordiyets, B.F., A.I. Osipov, and L.A. Shelepin (0). Kineticheskiye
protssesy v gazakh i molekulyarnyye lazery (Kinetic processes in
gases and molecular lasers). Moskva, Nauka, 1980, 512 p.
626. Ishchenko, Ye.F. (0). Otkrytyye opticheskiye rezonatory. Nekotoryye
voprosy teorii i rascheta (Open optical resonators. Problems of
theory and design). Moskva, Sovetskoye radio, 1980, 208 p.
627. Issledovaniya po fizike kondensirovannogo sostoyaniya. Fizicheskiye
nauki (Studies on condensed state physics. Physical sciences).
Edited by V.P. Mushinskiy (0). Kishinev, Shtiintsa, 1980, 107 p.
(RZhF, 6/80, 6Ye1273)
628. Klyatskin, V.I. (0). Stokhasticheskiye uravneniya i volny v
sluchayno-neodnorodnykh sredakh (Stochastic equations and waves
in randomly inhomogeneous media). Moskva, Nauka, 1980, 336 p.
629. Lobachev, V.M. (0). Radioelektronnaya geodeziya (Radioelectronic
geodesy). Moskva, Nedra, 1980, 327 p.
630. Kravtsov, Yu.A., and Yu.I. Orlov (0). Geometricheskaya optika
neodnorodnykh sred (Geometric optics of inhomogeneous media).
Moskva, Nauka, 1980, 304 p.

631. Muradyan, A.G., and S.A. Ginzburg (0). Sistemy peredachi informatsii po opticheskomu kabelyu (Systems for transmitting information over an optical cable). Moskva, Svyaz', 1980, 159 p. (RZhRadiot, 5/80, 5Ye247)
632. Nauchnyye i tekhnicheskiye problemy elektronnoy kinematografy (Scientific and technical problems in electronic cinematography). Leningradskiy institut kinofotinzhenirov. Trudy, no. 35, 1979, 144 p. (Cited in TKiT, no. 6, 1980)
633. Obrashcheniye volnovogo fronta opticheskogo izlucheniya v nelineynykh sredakh (Wavefront reversal of optical radiation in nonlinear media). Institut prikladnoy fiziki AN SSSR. Sbornik nauchnykh trudov. Edited by V.I. Bespalov (426). Gor'kiy, 1979, 205 p. (RZhF, 5/80, 5D895)
634. Orlovskiy, Ye.L. (0). Peredacha faksimil'nykh izobrazheniy (Transmission of facsimile images). Moskva, Svyaz', 1980, 216 p.
635. Prikladnaya fizicheskaya optika (Applied physical optics). Moskovskiy energeticheskiy institut. Trudy, no. 450. This issue edited by V.A. Fabrikant (19). 1980, 87 p.
636. Teplovyye nelineynyye yavleniya v plazme (Thermal nonlinear phenomena in a plasma). Institut prikladnoy fiziki AN SSSR. Sbornik nauchnykh trudov. Edited by V.Yu. Trakhtengerts (426). Gor'kiy, 1979, 216 p. (RZhMekh, 6/80, 6B337)

637. Tikhonov, Ye.A., and M.T. Shpak (0). Nelineynyye opticheskiye yavleniya v organicheskikh soyedineniyakh (Nonlinear optical phenomena in organic compounds). Kiyev, Naukova dumka, 1979, 383 p. (RZhF, 5/80, 5D894)
638. Vol'mir, A.S. (0). Obolochki v potoke zhidkosti i gaza. Zadachi gidrouprugosti (Shells in a liquid and gas flow. Problems of hydroelasticity [including laser and holographic measurements]). Moskva, Nauka, 1979, 320 p.
639. Yakovlev, I.A., and O.A. Shustin (0). Opticheskaya golografiya i yeye primeneniya (Optical holography and its applications). Moskva, Znaniye, 1979, 40 p. (KL, 19/80, 16954)
640. Yakovlev, M.A. (465). Elementy kvantovoy optiki. Opticheskiye kvantovyye generatory (lazery) i nekotorye ikh primeneniye (Elements of quantum optics. Optical quantum generators (lasers) and some of their applications). Kuybyshevskiy aviatsionnyy institut, 1979, 23 p. (KL, 19/80, 17050)

IV. SOURCE ABBREVIATIONS

(CIRC Codens)

APP (A)	(ATPLB)	Acta physica polonica
BAPS	(BAPTA)	Bulletin de l'Academie Polonaise des Sciences. Serie des Sciences Techniques
BAPS Chim	(BAPCA)	Bulletin de l'Academie Polonaise des Sciences. Serie des Sciences Chimique
BWAT	(BWATA)	Biuletyn Wojskowej akademii technicznej J. Dabrowskiego
DAN B	(DBLRA)	Akademiya nauk Belorusskoy SSR. Doklady
DAN SSSR	(DANKA)	Akademiya nauk SSSR. Doklady
DAN Tadzh	(DANTA)	Akademiya nauk Tadzhikskoy SSR. Doklady
DAN Uz	(DANUA)	Akademiya nauk Uzbekskoy SSR. Doklady
Elek	(EKNTB)	Elektronika [Poland]
ETP	(EXPPA)	Experimentelle Technik der Physik
FAiO	(IFAOA)	Akademiya nauk SSR. Izvestiya. Fizika atmosfera i okeana
FGiV	(FGVZA)	Fizika goreniya i vzryva
FiKhOM	(FKOMA)	Fizika i khimiya obrabotka materialov
FTP	(FTPPA)	Fizika i tekhnika poluprovodnikov
FTT	(FTVTA)	Fizika tverdogo tela
IAN Arm	(IAAFA)	Akademiya nauk Armyanskoy SSR. Izvestiya. Fizika
IAN Az	(IAFMA)	Akademiya nauk Azerbaydzhanskoy SSR. Izvestiya. Seriya fiziko-tekhnicheskikh i matematicheskikh nauk
IAN B	(VABFA)	Akademiya nauk Belorusskoy SSR. Izvestiya. Seriya fiziko-matematicheskikh nauk
IAN Fiz	(IANFA)	Akademiya nauk SSSR. Izvestiya. Seriya fizicheskaya
IAN Lat	(LZFTA)	Akademiya nauk Latviyskoy SSR. Izvestiya. Seriya fizicheskikh i tekhnicheskikh nauk
IAN M	(IZFMB)	Akademiya nauk Moldavskoy SSR. Izvestiya. Seriya fiziko-tekhnicheskikh i matematicheskikh nauk

IAN Uz	(IUZFA)	Akademiya nauk Uzbekskoy SSR. Izvestiya. Seriya fiziko-matematicheskikh nauk
I-FZh	(INFZA)	Inzhenerno-fizicheskiy zhurnal
IT	(IZTEA)	Izmeritel'naya tekhnika
IVUZ Fiz	(IVUFA)	Izvestiya vysshikh uchebnykh zavedeniy. Fizika
IVUZ Priboro	(IVUBA)	Izvestiya vysshikh uchebnykh zavedeniy. Priborostroyeniye
IVUZ Radiofiz	(IVYRA)	Izvestiya vysshikh zavedeniy. Radiofizika
KE	(KVEKA)	Kvantovaya elektronika
KhVE	(KHKVA)	Khimiya vysokikh energiy
KL	(KNLTA)	Knizhnaya letopis'
KLDV	(KLDVA)	Knizhnaya letopis'. Dopolnitel'nyy vypusk
Kristal	(KRISA)	Kristallografiya
Lit fiz sb	(LFSBA)	Litovskiy fizicheskiy sbornik
MZhiG	(IMZGA)	Akademiya nauk SSSR. Izvestiya. Mekhanika zhidkosti i gaza
NM	(IVNMA)	Akademiya nauk SSSR. Izvestiya. Neorganicheskiye materialy
OiS	(OPSPA)	Optika i spektroskopiya
OMP	(OPMPA)	Optiko-mekhanicheskaya promyshlennost'
Opt app	(OPAPB)	Optica applicata [Poland]
Otkr izobr	(OIPOV)	Otkrytiya, izobreteniya, promyshlennyye obraztsy, tovarnyye znaki
PSS	(PSSAB)	Physica Status Solidi (A). Applied Research
PTE	(PRTEA)	Pribory i tekhnika eksperimenta
RiE	(RAELA)	Radiotekhnika i elektronika
Roz elektr	(RZETA)	Rozprawy elektrotechniczne
RZhF	(RZFZA)	Referativnyy zhurnal. Fizika
RZhGeofiz	(GZGFA)	Referativnyy zhurnal. Geofizika
RZhMekh	(RZMKA)	Referativnyy zhurnal. Mekhanika
RZhRadiot	(RZRAB)	Referativnyy zhurnal. Radiotekhnika

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| Sb1 | Sbornik | Kvantovaya elektronika, no. 18, Kiyev, 1980. |
| Sb2 | | Fotometriya i yeye metrologicheskoye obespecheniye. Vsesoyuznaya nauchno-tekhnicheskaya konferentsiya. 3rd. Tezisy dokladov. Moskva, 1979. |
| Sb3 | | Wissenschaftliche Zeitschrift der Friederich-Schiller-Universitaet Jena. Mathematisch-naturwissenschaftliche Reihe, no. 2-3, 1979. |
| Sb4 | | Obrashcheniye volnogo fronta opticheskogo izlucheniya v nelineynykh sredakh. Institut prikladnoy fiziki AN SSSR. Gor'kiy, 1979. |
| Sb5 | | Tekhnika elektroniki i elektrodinamiki, no. 4, Saratov, 1979. |
| Sb6 | | Fizicheskiye yavleniya v segnetoelektrikakh. Riga, 1979. |
| Sb7 | | Lazernyye puchki. Khabarovsk, 1979. |
| Sb8 | | Teplovyye nelineynyye yavleniya v plazme. Institut prikladnoy fiziki AN SSSR. Gor'kiy, 1979. |
| Sb9 | | Analele Universitatii Timisoara. Serie stiintele fizica-chimie, no. 1, 1978. |
| Sb10 | | Voprosy teorii plazmy, no. 10, Moskva, 1980. |
| Sb11 | | Problemy statisticheskoy i kvantovoy fiziki. Moskva, 1979. |
| Sb12 | | Obrabotka i interpretatsiya fizicheskogo eksperimenta. Moskva. 1979. |
| Sb13 | | Primeneniye lazerov v atomnoy, molekulyarnoy i yadernoy fizike. Vsesoyuznaya shkola. Ist. Vil'nyus, 21-31 Aug 1978. Trudy. Moskva, Nauka, 1979. |
| Sb14 | | Teoriya i operativnyy prognoz tsunami. Moskva, 1980. |
| Sb15 | | Zapominayushchiye ustroystva. Institut kibernetiki AN UkrSSR, Kiyev, 1980. |
| Sb16 | | Voprosy istorii yestestvoznaniya i tekhniki, no. 67-68, Moskva, 1980. |
| Sb17 | | Sbornik prací Pedagogické fakulty v Ostrave, v. A-14, no. 62, 1979. |
| Sb18 | | Khimicheskaya fizika protsessov goreniya i vzryva. Detonatsiya. Vsesoyuznyy simpozium po goreniyu i vzryvu. 6th. Alma-Ata, 23-26 Sep 1980. Materialy. Chernogolovka, 1980. |
| Sb19 | | Dielektriki i poluprovodniki, no. 17, Kiyev, 1980. |

- Sb20 Metodologicheskiye voprosy prikladnoy elektrodinamiki. Leningrad, 1978.
- Sb21 Uchenyye zapiski TsAGI, no. 3, 1980.
- Sb22 Razvedochnaya geofizika, no. 89, 1980.
- Sb23 Fiziko-tekhnologicheskiye voprosy kibernetiki. Kiyev, 1979.
- Sb24 Problemy energeticheskoy fotometrii. Moskva, 1979.
- Sb25 Fizika prochnosti i plastichnosti metallov i splavov. Frunze, 1979.
- Sb26 Sovetsko-Amerikanskiy seminar po ionnoy implantatsii. 2nd. Pushchino, 1979. Trudy. Novosibirsk, 1979.
- Sb27 Fizika metallov i ikh soyedineniy. Sverdlovsk, 1979.
- Sb28 Dinamika izlucheyushchego gaza, no. 3, Moskva, 1980.
- Sb29 Gazovaya i volnovaya dinamika, no. 3, Moskva, 1979.
- TiEKh (TEKHA) Teoreticheskaya i eksperimental'naya khimiya
- TKiT (TKTEA) Tekhnika kino i televedeniya
- Tr1 Trudy VNII monokristallov, Stsintillyatsionnykh materialov i osobo chistyykh khimicheskikh veshchestv. Sbornik nauchnykh trudov, no. 4, 1979.
- Tr2 Leningradskiy elektrotekhnicheskiy institut. Izvestiya, no. 250, 1979.
- Tr3 Moskovskiy fiziko-tekhnicheskiy institut. Trudy, no. 11, 1979.
- Tr4 Azerbaydzhanskiy universitet. Nauchnyye trudy. Seriya fiziko-matematicheskikh nauk, no. 4, 1979.
- Tr5 Vychislitel'nyy tsentr Moskovskogo GU. Sbornik rabot, no. 31, 1979.
- Tr6 Moskovskiy energeticheskiy institut. Trudy, no. 450, 1980.
- Tr7 Nauchnyye trudy vysshikh uchebnykh zavedeniy Litovskoy SSR. Ultrazvuk, no. 12, 1980.
- Tr8 Leningradskiy politekhnicheskiy institut. Trudy, no. 366, 1979.
- Tr9 Karakalpakskiy filial AN UzSSR. Vestnik, no. 3, 1979.
- Tr10 Moskovskiy energeticheskiy institut. Trudy, no. 432, 1979.

Tr11		Gosudarstvennyy opticheskiy institut. Trudy, no. 178, 1979.
Tr12		Trudy uchebnykh institutov svyazi. Radiotekhnicheskiye sistemy i ustroystva. Leningrad, 1979.
Tr13		Institut okeanologii AN SSSR. Trudy, no. 90, 1980.
Tr14		Moskovskiy fiziko-tekhniicheskiy institut. Trudy. Seriya Aerofizicheskaya i prikladnaya matematika. Dolgoprudnyy, 1979.
Tr15		Moskovskiy energeticheskiy institut. Trudy, no. 451, 1980.
Tr16		Tashkentskiy gos pedagogicheskiy institut. Sbornik nauchnykh trudov, no. 22, 1978.
Tr17		Moskovskiy energeticheskiy institut. Trudy, no. 441, 1979.
TVT	(TVTYA)	Teplofizika vysokikh temperatur
UFN	(UFNAA)	Uspekhi fizicheskikh nauk
UFZh	(UFIZA)	Ukrainskiy fizicheskiy zhurnal
VMU	(VMUFA)	Moskovskiy universitet. Vestnik. Fizika, astronomiya
ZhETF	(ZEIFA)	Zhurnal eksperimental'noy i teoreticheskoy fiziki
ZhETF P	(ZFPR)	Pis'ma v Zhurnal eksperimental'noy i teoreticheskoy fiziki
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CHUKANOVA I N	38	F		GORDIYETS B F	97
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DAVYDOV A M	53	PEDOROV V A	70	GRIBKOV V A	69
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DEGTYARENKO K M	9	PEDOROV YU A	84	GRIGOROV D Z	69
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KRUGLYAKOV E P	76	LEVIN A B	87	MARAKHONOV V I	52
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KRUTYAKOVA V P	84	LEVIN M B	8	MARCHENKO V S	92
KRUZHILIN YU I	31	LEVIT B I	5	MARENNIKOV S I	2
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KRYUKOV P G	57	LIBERTS G V	28	MARKIN A S	22
KRZHIZHANOVSKIY R YE	70	LINNIK L F	6	MARSZALEK T	10
KSHEVETSKAYA M L	40	LINNIIK L G	6	MARTYNOVICH YE F	2, 80
KSHEVETSKIY S A	40	LIS L	15	MARYKIVSKIY O YE	64
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KUROCHKIN YU V	94	LUCHINSKIYG V	29	MEDVEDEV S P	6
KUVATOVA YE A	33	LUGOVSKOY B V	86	MEL'NIK I V	28
KUZ'MENKO V A	83	LUKASHEVICH P G	4	MEL'NIKOV L YU	20
KUZ'MICHEV V M	63, 66	LUKASZEWICZ M	15	METEL'SKIY V M	65
KUZ'MIN M G	9	LUKIN A V	71	MEYSNER L B	82
KUZ'MIN R N	40	LUKIN I P	47, 48	MIGOLINETS I M	87
KUZ'MIN V S	35	LUKIN K A	33	MIKAELIAN A L	45
KUZNETSOVA S A	71	LUKIN V P	47	MIKAYELIAN G T	4
KUZNETSOVA T I	50	LUKINYKH V F	79	MIKHAYLOV S I	36
KUZNETSOVA V V	64	LUKK A A	71	MIKHAYLOV YU A	90, 91
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LAZUTKIN O N	94	MALKES L YA	38	MIROVITSKIY D I	96
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LEGASOV V A	83	MALOFEYEV V S	26	MITICHKIN A I	79
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MOLOTKOV L I	90	NOVOZHILOV S YU	43	PERCHI Z Y	47
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MURUGOV V M	25	OPANASYUK YU D	9	PETRUSHENKO YU YE	4
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